



URBAN DISTRICT COUNCIL

OF

ESHER & THE DITTONS.

FOURTEENTH

Annual Report

OF THE

MEDICAL OFFICER OF HEALTH

For the Year 1908.

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ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH.

THAMES DITTON,
SURREY,
February, 1909.

*To the Chairman and Members of the Urban District
Council of Esher and the Dittons.*

GENTLEMEN,

I have the honour to present my fourteenth Annual Report on the health and sanitary state of the District, for the year ending December 31st, 1908. The estimated population at the middle of 1908 amounts to 10,783, an increase of 546 persons; the natural increase, that is the excess of births over deaths, is 146, and I feel sure that this estimate of the population is less than the actual number of persons residing in the district.

There were 257 births registered during the year, or 23·8 per 1,000 living in the District. The birth-rate for England and Wales for this period is 26·5, and in a residential district such as this it is usual to find the local birth-rate lower than that for the whole country. Six of the births registered were those of illegitimate children, or a percentage of 2·3.

The number of persons who died during the year was 95, one of whom was a non-resident and must be deducted for the purpose of the report, and 94 deaths gives a rate of 8·4; but it is also necessary to add deaths of residents who may have died outside the district, and these amount to 17, which brings the total deaths up to 111, or a rate of 10·2 per 1,000 of estimated population. This figure compares very favourably with the rate for the country generally, namely, 14·7 per 1,000. Among children under the age of one year 22 died, from which is estimated the comparative infant death-rate of 85 per 1,000 births; the rate for the whole country is 121. In Table V. at the end of the report is an analysis of the causes of death among these children. It will be seen that over one-third of the deaths occurred during the first month. The number of deaths due to premature birth is less than it has been for some years, and, generally speaking, the number of deaths in this table is less than I have had to record in some previous years.

Below I give a table showing the rates for this district compared with those of England and Wales:—

	Annual Rates per 1,000 living.			Infant Mortality per 1,000 Births.
	Births.	Deaths.	Infectious Disease.	
Esher and The Dittons	23·8	10·2	·82	85·0
England and Wales.	26·5	14·7	1·29	121

Nine deaths were due to infectious diseases, giving a rate of ·82 and comparing very well with the rate for the country of 1·29.

The deaths from tubercular diseases numbered 17, or a rate of 1·5 per 1,000 living in the district. The phthisis death-rate for England is usually about 1·6, and the local rate is very nearly equal to this, and is much more than the same rate for last year, '86 for this district. I am unable to give any explanation for the increase, except that it is probably a temporary rise, and that I hope next year the rate will be proportionately smaller.

Eight inquests were held during the past year, 5 in Thames Ditton, 2 in Long Ditton, and 1 in Esher.

In Table IV. it will be seen that the next most fatal disease to tuberculosis is the number grouped under the head of "Cancer." This includes all deaths from any growth which is malignant, so that sarcoma and growths in the chest (mediastinal) come into this group. The popular idea is that cancer is increasing in prevalence, and this is the experience of the Cancer Research workers which is confirmed slightly in the figures I submit below. In the "Practitioner" for February, 1908, Dr. Leeson published a paper on Cancer in Twickenham, giving statistics covering a period of twenty years. I have made an analysis of the returns of this district for the past ten years on similar lines, and submit the results in tables below. It is first necessary to point out that a period of ten years is too short to draw any general deductions from, and also that in so small a population as 11,000 there are many conditions of age and distribution of sex, which, if not allowed for, might lead to serious error if I ventured to draw any inferences from the figures I have obtained.

TABLE A.

Deaths from all Causes and from Cancer during last
Ten Years.

Year.	Total Deaths from all Causes.	Cancer.	Males.	Females.	Rate of Death from Cancer.
1899	119	5	2	3	1-23
1900	94	6	1	5	1-15
1901	133	7	1	6	1-19
1902	104	11	4	7	1-9
1903	118	7	4	3	1-16
1904	107	6	3	3	1-18
1905	98	11	3	8	1-9
1906	111	16	5	11	1-6
1907	122	13	4	9	1-9
1908	111	12	7	5	1-9
TOTALS...	1,117	94	34	60	1-11

TABLE B.

Taking the two Periods of Five Years.

Year.	Total Deaths.	Cancer.	Males.	Females.	Rate.
1899 to 1903	558	36	12	24	1-15
1904 to 1908	549	58	22	36	1-9

This table shows the increase in the Cancer death-rate during the second period of five years from 1 in 15 to 1 in 9, and an actual increase in the number of deaths from 36 to 58. During the ten years under consideration the estimated population increased from 8,900 to 10,700.

In order to ascertain whether any special occupations were more likely to induce cancer than others I have prepared the following table:--

TABLE C.

Cancer deaths classified under occupations, for ten years, 1899-1908.

Married (females only)	...	...	27
Independent means	...	...	19
Widows	...	...	16
Publican	...	...	2
Labourer	...	...	2
Gardener	...	...	4
Dressmakers	...	...	2
Engineers	...	...	2
Solicitors	...	...	3
Clerks	...	...	2
Carpenter	...	...	2
Carman, Restaurant Manager, Grocer, Stableman, Painter, Builder, Coachman, Racing Official, Corn Merchant, Boiler Maker, Nurse, Draper, Clergyman, 1 each	...	...	13
			—
			94

This table shows the distribution of the deaths among different trades and professions, and how this disease seems to attack the female sex. And the incidence was greatly in excess among those women who are or have been married, as only seventeen deaths were registered among single women. The next highest incidence was among those who are described as being of independent means, and one wonders whether comparative affluence is of any effect in aiding the onset of the growth. In other respects the disease appears to have been quite indiscriminate, and to develop among people of all grades in the social scale.

In the next table I have classed the deaths according to the part of the body invaded.

TABLE D.

Showing the Cancer deaths classified according to the site of disease.

Malignant Disease of the Digestive					
Organs	...	...	...	...	55
Female Reproductive Organs				...	23
Various Organs		...	...	...	2
Mediastinum	...	...	...	...	6
“ Carcinoma ”		...	...	...	1
Various sarcomata		...	...	...	7
					—
					94
					—

This shows the marked incidence of the disease on the organs of digestion, a fact which has been recognised for some time, but which has so far not been explained.

TABLE E.

Showing the ages at death in the two periods of five years.

Years.	Deaths.	Years. Combined Ages	Average
1899 to 1903	36	2,022	56·1
1904 to 1908	58	3,602	62·1

The results I deduce from these tables are:

1. That about one death in 11 is due to Cancer, with an increase in the actual number of deaths during the second quinquennial period.
2. That the disease tends to attack more women than men, but shows no predilection to choose any special trades or professions.
3. That the majority of cases are diseases of the digestive system.
4. That it is essentially a disease of the later part of the span of life.

The total number of notifications received and dealt with during the year was 48, as compared with 52 during 1907.

Below I give the figures for the last five years with the averages for each disease:—

	1908	1907	1906	1905	1904	Average.
Total No. of Notifications received	48	52	52	45	20	43·4
Scarlet Fever	14	21	27	33	11	19·2
Diphtheria... ..	13	16	5	9	6	9·8
Enteric Fever	1	3	3	3	3	2·6
Tuberculosis	6	12	17	—	—	—

The voluntary notification of tuberculosis has only been in force during the last three years of this time, and, if these cases be deducted, the average number of notification should be 36·4, which shows that as far as the dangerous infectious diseases are concerned the incidence of illness was below the average. There was no serious outbreak of any of these diseases, only isolated cases which did not appear to have the same or a similar course of infection.

I am glad to be able to note that there was freedom from smallpox, but fear that should there be any infection of this kind there must soon be a large number of unprotected children. The practice of vaccination is not carried out as it should be, if it is to be a real preventive of smallpox, and as it is no longer compulsory to have children vaccinated, and consequently much fewer children are done than in former years, at any rate by the Public Vaccinators, the unprotected population must be increasing in the same ratio as vaccination is falling into disuse.

I paid a visit to the Smallpox Hospital that the Surrey County Council has built at Clandon, and it appears to be well suited in every way for the purpose for which it is built. It is especially well arranged, with a view to rapid and inexpensive enlargement should it be necessary to do so at any time.

There were three fatal cases of diphtheria, but I was not able to find in what manner the illness was contracted.

All the cases of scarlet fever were very mild, and in some instances the diagnosis was not easy owing to the indefinite nature of some of the symptoms. The control of this disease is at times of great difficulty owing to these mild cases which often go unrecognised and lead to a series of cases for which there seems to be no cause. Our efforts to control the spread of scarlet fever have a two-fold object: firstly, to diminish the prevalence of the disease; and, secondly, to diminish its virulence. With regard to the first I can make no definite statement, but it would appear as if the disease was at least at a standstill, even if it is not more prevalent than was the case in former years. In the second object there is certainly more success to be noted, as shown by the fact that the mortality at all ages from scarlet fever has fallen from 649 per million in the period from 1871 to 1880, to 158 per million in the period 1891 to 1900.

It is my practice to visit all cases of tuberculosis that are notified, and to give simple printed instructions as to what steps should be taken by the patient and his friends to prevent the spread of the infection, and, when fatal cases occur, to arrange for the disinfection of the rooms, etc., as soon after the burial as possible.

The disinfection of rooms after infectious cases have been removed to Hospital is almost always done by spraying with Formaline solution, and I find that this method is effectual, clean and easily carried out.

During the year I paid 14 visits to the elementary schools for the purpose of making enquiries as to infectious disease. In one instance it was necessary to close an Infants' School for whooping cough for three weeks.

There was an extensive outbreak of German measles in Claygate, and I again advised the return of the children as soon as well enough, without waiting for the elapse of the usual ten days from the disappearance of the rash. At Long Ditton a temporary school has been provided for the infants, and it was necessary to provide a new system of drainage for the building, which has been well carried out under the Surveyor's supervision. An airy school has been thus provided, and the children have ample room there, but there is unfortunately no playground available for their use. By the vacation of the rooms further space has been gained for the use of the older children in Long Ditton School.

A new school is being built at Thames Ditton for the use of the boys, and, when finished, will supply ample room for them, besides relieving the crowding which at present is seen in the girls' rooms.

At the Infants' School at West End, Esher, the old pail closets have been abolished and replaced by properly drained lavatories connected to the sewer. The school buildings at Esher Village and at Long Ditton are in good repair, but are old in design, and it will shortly be necessary to provide new buildings at both these places.

Throughout the whole of the district the school lavatories are constantly inspected by the Sanitary Inspector, and on each occasion that I visit any school I make an inspection of these parts.

The work of medically examining the school children is carried out under the control of the Education Committee of the County Council. This work is in progress, but up to the present time no matter has been brought to my notice which has required any action on the District Council's part.

The Dairies, Cowsheds and Milkshops are also under constant inspection, in order to ensure that there are no nuisances, and to see that the Council's regulations with regard to cleanliness and whitewashing are adhered to. Every three months all the cattle in the registered cowsheds are inspected by the Veterinary Surgeon appointed for that purpose, and it is only at rare intervals that any animals are reported as diseased. Under the new General Powers Act the London County Council have made inspections at one of the farms in the district, and there found an animal that was suffering from tuberculosis, and which had been passed a short time before at the regular inspection as healthy. This is of course quite possible, and that in the intervening few weeks the disease had developed. A communication was received from the London County Council with regard to this cow, and it was found to have been removed from the farm. This case has shown a grave omission from the Act, as it gives no power to the Council to make sure that diseased animals cannot be transferred from one part to another except under such conditions as will ensure the safety of the public. When cows are found to be tuberculous it is our custom to prohibit the use of the milk from such cow as food, and, whenever possible, the Inspector sees the milk thrown away. It should also be an offence to use the milk as food for pigs, as there is evidence to show that there is a vast amount of tuberculosis among these latter animals.

The Factories and Workshops have been under systematic inspection, and in no case was any serious defect or nuisance discovered. There are ten factories in the District, and in only one case was it necessary to send a written notice to obtain the abatement of a nuisance, and this received prompt attention. There are 229 workshops, including laundries and dressmakers' rooms. These also have been regularly visited, and requests to

amend defects were always responded to at once. The nine bakehouses, one of which is an underground one, under the Act, have been regularly inspected, and the special provisions regarding this class of workshop have been properly carried out. No cases of "outworkers" have been reported to me, and I have not had to send any lists of outworkers to the Medical Officer of any other district.

I received a notice that a case of Anthrax had occurred on a private farm, and on visiting the place I found that all possible precaution had been taken both to safeguard the workers on the farm and to prevent the spread of the disease to the other animals. During the past fifteen years no cases of Anthrax have occurred in this district, and neither have there been any cases of Hydrophobia, or Glanders, and I do not think there would be any gain to the neighbourhood if any of these diseases were to be made notifiable.

The whole of the cottage property have been subject to a constant and continuous inspection, with the result that a large number of minor defects receive amendment, and in this way the district is kept free from any serious nuisances. Ten complaints were received regarding defective drains, and in each case a test was made, and in five instances it was necessary to relay the drain.

The Council has made application for the adoption of portions of the Public Health Act Amendment Act of 1907, and if this comes into force additional powers will be obtained for dealing with certain defects, which at present it would be very difficult to amend, if not quite impossible. I am glad to be able to note that the Council has decided to enforce the by-law dealing with the paving of a certain minimum space round all new buildings, and under the new Act it should not be difficult to get spaces round some of the older cottages paved and drained, an improvement which is badly needed.

The water supplied by the Metropolitan Water Board is of good quality and ample in quantity, though the pressure is at times low in the higher parts of the District.

The system of main drainage is working well, and there is now no heading back of sewage in the lower lying districts, as had been the case before the new gravitating sewer was laid. The sewage is treated in the same manner at the Sewage Farm at Esher, by precipitation with Alumina-Ferric, and settling in tanks, with downward filtration over the land.

The house to house collection of refuse is carried out weekly, and, if possible, oftener, and the refuse is taken to the brickfields at Claygate, and there used as fuel in burning bricks. There is still a large amount imported into the District, but the agreement with the London and S.W. Railway Co., as to the limitation of time when this importation is to be done, is still working well, and no complaints have been received lately of any nuisance caused by this imported refuse. Fortunately there is a large space available for the storage of this refuse, and here again no complaints have been received as to any nuisances.

I submit a short account of the work done by the Sanitary Inspector, which I think shows that this part of the sanitary work of the district is receiving careful and painstaking attention, and I take this opportunity of thanking Mr. G. C. Over for much assistance in the work, which is always at my disposal whenever I have had occasion to ask for it. I also wish to thank the Clerk and the Surveyor for their ready help on many occasions during the past year.

I am, Gentlemen,

Your obedient Servant,

A. SENIOR, M.B.Cantab., D.P.H.

The Urban District Council of Esher and the Dittons.

COUNCIL OFFICES, THAMES DITTON,

January, 1909.

Dr. Senior, D.P.H.,

Medical Officer of Health.

Dear Sir,

I beg to submit my sixth Annual Report briefly describing the work of my office carried out during the year ending December, 1908.

SANITARY ADMINISTRATION.

The existing small cottage property, together with new additions which are constantly being added, furnishes plenty of scope for carrying out the duties required of an Inspector in the way of visits from house to house, especially in the poorer and more thickly populated parts of the District. This work has been in progress throughout the year, and, where necessary, the attention of occupants was directed to the evil effects of bad smells, neglected drainage, want of fresh air and dirty conditions of all kinds, which are by no means infrequently met with.

Ventilation alone requires never ending explanation. The benefits to be derived by the admission of fresh air to stuffy bed and living rooms are entirely ignored by some occupiers. With regard to light, many small cottage holders rarely, if ever, trouble to clean their windows, which are usually obscured by blinds of some kind, and if one or two panes of glass happen to be broken, both light and air are invariably excluded by a stuffing of rags and paper. I have several instances of this in my mind at the present time.

Those who are not familiar with poor people's houses, their methods of keeping them and the appurtenances thereof, can only imagine the scope of work implied in these few words of definition.

In carrying out house to house inspection work, the Inspector must possess and use any amount of tact if he wishes to inspect the entire cottage and its surroundings without arousing hostility on the part of the occupants.

The schedule at the end of this Report shows the result of the inspections made by the number of nuisances abated, cottages cleansed, and other sanitary improvements carried out during the year.

All these matters tend to influence the comfort and sanitation of cottages and neighbourhoods, but which are apt to be greatly neglected unless special attention is taken to enforce them.

INSPECTION OF MEAT AND OTHER FOODS.

Articles of food of a perishable nature at the various shops and stores, exposed for sale or in course of preparation for sale, have from time to time been inspected in accordance with Section 116 of the Public Health Act and its Amendments. Nothing intended for human food either diseased, unsound or otherwise unfit for its purpose, came under my notice.

It was in order to gain the technical knowledge required for carrying out the duties set forth in the above section that I obtained the qualification of an Inspector of Meat and other Foods. With regard to this my best thanks are due to the Medical Officer for much valuable assistance and advice relating to abstruse matters connected with the examination.

All food animals are liable to forms of disease and, naturally, meat is the chief article of food requiring inspection. As the organs of an animal will furnish the most easily detected evidence of disease when it is present, the slaughterhouse is the proper place in which to make inspections, and where the inspector's knowledge and training can be turned to good account.

SLAUGHTER-HOUSES.

There are nine slaughter-houses (all private) within the District. They have been frequently visited and inspected, and were, as a rule, found in a cleanly state. In the few cases where I had to requisition the cleansing and limewashing of walls, etc., the work was promptly carried out by the occupiers. All garbage, skins and offal was removed from the respective premises as speedily as possible after it was produced, thus preventing the bad odours inseparable from decomposing matter.

In one case a defective floor was re-paved, whilst in another instance a defective yard was re-paved.

COWSHEDS, DAIRIES AND MILKSHOPS.

At the close of the year 1908 the names of 31 persons were on the register as being engaged in carrying on the milk trade within the District, classified as follows:—Cowkeepers and Dairymen, 17; Purveyors and sellers of Milk, 14.

All the premises have been inspected from time to time, the total of visits amounting to 194.

The cowshed buildings were limewashed at the appointed seasons, and in some cases at intervals between. On the whole a good standard of cleanliness has been maintained in connection with the milk production and disposal within the District.

At one of the farms accommodation in accordance with modern requirements has been provided for a further 18 cows, and in a second instance important improvements were carried out in connection with the drainage system.

BAKEHOUSES.

There are nine bakehouses, all of which have been inspected regularly, and were found to be kept in a satisfactory condition. A verbal intimation has sufficed in every instance, except one, to secure the requisite limewashing of walls, etc.

At one of the oldest bakehouses it became necessary to carry out some structural alterations and repair to the floor. This work the occupier caused to be done.

THE ELEMENTARY SCHOOLS.

The schools have been regularly visited and the sanitary arrangements inspected, and I have always found the places well looked after. No insanitary conditions have been allowed to exist.

LAUNDRIES AND WASH-HOUSES.

These places are kept under observation and inspected from time to time, and during the year I have caused cleansing, etc., to be carried out in 13 instances.

DISINFECTION.

Thirty-two houses have been wholly or partly disinfected with formaline or fumigated with sulphur as was required, where cases of infectious disease occurred.

SUMMARY OF INSPECTIONS, WORKS OF
IMPROVEMENT, AND NUISANCES ABATED
DURING THE YEAR ENDING DECEMBER
31st, 1908.

Number of Inspections of Dwellings made under the Public Health Act	... ..	1234
Re-inspections to ascertain if Nuisances were abated	... ..	455
Miscellaneous Inspections of Premises other than Dwellings	... ..	174
Inspections under the Factory and Workshops Act	... ..	254
Inspections of Cowsheds, Dairies and Milkshops	...	194
Number of Complaints received and investigated		68
Number of Dwellings wholly or partly disinfected		32
Dwellings cleansed, etc., throughout	... ..	16
Dwellings partially cleansed as required	... ..	34
Cleansing, Repairs, etc., under the Factory and Workshops Act	... ..	21
Private House Drains tested	... ..	15
New Sanitary Dust Bins provided	... ..	79
W.C. Flushing Tanks repaired	... ..	40
New w.c. Tanks provided and fixed	... ..	21
New w.c. Basins provided and fitted	... ..	19
Foul w.c. Basins cleansed	... ..	22
Blocked Drains cleansed	... ..	11

Defective Drains repaired	9
Soil Pipes repaired	4
New Domestic Sinks provided	4
Repairs to Sinks, Gullies, etc.	10
Leaky Roofs and Gutters repaired	20
Miscellaneous Nuisances abated	31
Larders ventilated	4
Flats cleansed throughout	6

I am, Sir,

Yours obediently,

GEO. C. OVER, Assoc.R.San.Inst.,
Sanitary Inspector.

TABLE II.—Esher and the Dittons.

YEAR.	NAMES OF LOCALITIES.															
	THAMES DITTON.				LONG DITTON.				E-SHER.				CLAYGATE.			
	Population esti- mated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births Registered.	Deaths at all Ages.	Deaths under 1 year.
1898...	3,094	100	44	6	2,150	49	19	3	2,489	48	31	8	1,250	29	10	3
1899...	3,157	89	47	13	2,175	38	21	4	2,518	49	29	5	1,278	29	13	2
1900...	3,235	95	36	9	2,206	49	19	4	2,554	39	18	4	1,313	22	14	3
1901...	3,311	88	56	14	2,237	41	28	3	2,590	47	29	5	1,346	38	16	4
1902...	3,377	97	49	10	2,265	44	20	3	2,623	44	19	5	1,375	29	12	3
1903...	3,434	87	45	10	2,289	28	19	7	2,650	52	34	2	1,400	30	16	4
1904...	3,498	110	50	14	2,313	46	21	7	2,671	53	26	4	1,425	39	10	2
1905...	3,562	99	43	11	2,340	38	19	1	2,697	52	21	2	1,456	34	15	3
1906...	3,641	111	52	7	2,374	56	30	8	2,739	56	18	3	1,495	52	12	4
1907	3,759	123	47	13	2,425	51	26	6	2,802	53	32	5	1,553	49	17	1
Aves. of yrs. 1898-1907	3,408	99	46	10	2,277	44	22	4	2,633	49	25	4	1,389	35	13	2.9
1908...	3,860	91	33	5	2,477	65	23	9	2,864	54	22	3	1,598	47	12	4

TABLE III.—Cases of Infectious Disease notified during the Year 1908,
in the Urban District of Esher and the Dittons.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							Total Cases Notified in Each Locality	* No. of Cases Removed to Hospital from Each Locality.									
	At all Ages.	At Ages--Years.							Th. Ditt.	Long Ditt.	Esh- er.	Clay- gate.	Th. Ditt.	Long Ditt.	Esh- er.	Clay- gate.	Total cases Removed to Hospital.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards											
Small Pox ...																		
Cholera ...																		
Diphtheria (incl. Memb. Croup)	13	1	3	5	4	...		4	3	4	2	2	2	4	2		10	
Erysipelas ...	11	...	...	1	1	9	...	3	5	2	1							
Scarlet Fever ...	14	...	...	10	1	3	...	9	1	2	2	7	1	2	1		11	
Typhus Fever...																		
Enteric Fever ...	1	...	...	...	...	1	...	...	...	1								
Relapsing Fever																		
Continued Fever																		
Puerperal Fever	3	...	...	...	1	2	...	1	1	...	1							
Plague ...																		
Tuberculosis ...	6	...	...	2	...	4	...	3	1	2								
TOTALS ...	48	1	3	18	7	19	...	20	11	11	6	9	3	6	3		21	

* Tolworth Isolation Hospital, Surbiton District.

TABLE IV.
Causes of, and ages at, Death during Year 1908.

CAUSES OF DEATH.	DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING IN OR BEYOND THE DISTRICT.							DEATHS IN LOCALITIES (AT ALL AGES).				DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.
	All ages.	Under 1.	1 & under 5.	5 & under 15.	15 & under 25.	25 & under 65.	65 & upwards.	Thames Ditton.	Long Ditton.	Esher.	Claygate.	
Small-pox												
Measles	3	...	2	...	1	...	...	3				
Scarlet fever												
Whooping-cough...	3	1	1	1	...	...	...	1	...	1	1	
Diphtheria (includ- ing membranous croup)	3	1	2	...	...	...	...	1	2			
Croup												
Fever :—												
Typhus												
Enteric												
Other continued												
Epidemic influenza	4	...	...	...	...	3	1	1	...	3		
Cholera												
Plague												
Diarrhœa												
Enteritis	2	2	...	...	...	...	...	1	1			
Puerperal fever ...	1	...	...	...	...	1	...	...	...	...	1	
Erysipelas.. ...												
Phthisis (Pulmonary Tuberculosis) ...	15	1	1	1	2	10	...	4	5	2	3	
Other tuberculous diseases	2	...	...	...	...	1	1	1	...	...	1	
Cancer, maglignant disease	12	...	...	...	...	4	8	5	...	6	1	
Bronchitis... ..	6	1	...	...	...	...	5	4	1	1		
Pneumonia	3	2	...	...	..	...	1	2	...	...	1	
Pleurisy												
Other diseases of res- piratory organs...	1	...	1	...	...	...	...	1				
Alcoholism)												
Cirrhosis of liver) ...												
Venereal diseases...												
Premature birth ...	4	4	...	...	...	...	...	...	2	2		
Diseases & accidents parturition												
Heart diseases	8	1	...	1	...	4	2	5	1	1	1	
Accidents	1	...	...	..	...	...	1	1				
Suicides												
All other causes ...	43	9	1	...	2	11	20	11	18	6	5	3
All causes	111	22	8	3	5	34	39	41	30	23	14	3

TABLE V.—Esher and The Dittons Urban District.
Infantile Mortality during the year 1908. Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes	{ Certified ... Uncertified ...	5	1	2	...	8	2	1	1	1	3	3	1	...	1	...	1	22
<i>Common Infectious Diseases :</i>																		
Small-pox																		
Chicken-pox																		
Measles																		
Scarlet Fever																		
Diphtheria (inc. M. Croup)																		
Whooping Cough																		
<i>Diarrhœal Diseases :</i>																		
Diarrhœa, all forms																		
Enteritis, Muco-enteritis }																		
Gastro-enteritis }																		
Gastritis, Gastro-intestinal Catarrh }																		
<i>Wasting Diseases :</i>																		
Premature Birth																		
Congenital Defects																		
Injury at Birth																		
Want of Breast Milk, }																		
Starvation }																		
Atrophy, Debility, }																		
Marasmus }																		
<i>Tuberculous Diseases :</i>																		
Tuberculous Meningitis																		
Tuberculous Peritonitis : }																		
Tabes Mesenterica }																		
Other Tuberculous Diseases																		
<i>Other Causes :</i>																		
Erysipelas																		
Syphilis																		
Rickets																		
Meningitis (not Tuberculous)																		
Convulsions																		
Bronchitis																		
Laryngitis																		
Pneumonia																		
Suffocation, overlying																		
Other Causes																		
		5	1	2	...	8	2	1	1	1	3	3	1	...	1	...	1	22

District (or sub-division) of Esher & The Dittons ... 10,783 Population, estimated to middle of 1908,

Births in the year { Legitimate, 257. Deaths in the year of { Legitimate Infants, 21
 { Illegitimate, 6. { Illegitimate „ 1
 Deaths from all Causes at all Ages, 111.

Factories, Workshops, Laundries, Workplaces & Homework.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspection.	Written Notices.	Prosecutions.
FACTORIES (including Factory Laundries)	25	1	
WORKSHOPS (including Workshop Laundries)	238	7	
WORKPLACES (Other than Outworkers' premises included in Part 3 of this Report)			
TOTAL	263	8	

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found	Remedied.	Referr'd to H.M. Insp'ct'r	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of Cleanliness	5	5		
Want of Ventilation				
Overcrowding				
Want of Drainage of Floors				
Other Nuisances	2	2		
† Sanitary Accommodation—				
Insufficient				
Unsuitable or Defective				
Not separate for Sexes				
<i>Offences under the Factory & Workshop Act :—</i>				
Illegal occupation of underground bakehouse (s. 101)				
Breach of Special Sanitary Requirements for Bakehouses (ss. 97 to 100)	1	1		
Other Offences (Excluding Offences relating to Outwork which are included in Part 3 of this Report)				
Total	8	8		

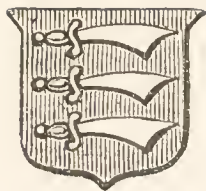
* Including those specified in sections 2, 3, 7 and 8, of the Factory and Workshop Act as remediable under the Public Health Acts.

† For Districts not in London, state here whether Section 22 of the Public Health Acts Amendment Act, 1890, has been adopted by the District Council; and if so, what standard of sufficiency and suitability of sanitary accommodation for persons employed in factories and workshops has been enforced.

3.—OTHER MATTERS.

Class.	Number.
MATTERS NOTIFIED TO H.M. INSPECTOR OF FACTORIES :—	
Failure to affix Abstract of the Factory and Workshop Act (S. 133)	
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5) {	
Notified by H.M. Inspector ...	
Reports (of action taken) sent to H.M. Inspector ...	
Other	
UNDERGROUND BAKEHOUSES (S. 101):—	
Certificates granted during the year	
In Use at the end of the year	1
HOMEWORK :—	
<i>List of Outworkers*</i> (S. 107):—	
Lists received	
Addresses of Outworkers {	
forwarded to other Authorities ...	
received from other Authorities ...	
<i>Homework in Unwholesome or Infected Premises</i> :—	
Notices prohibiting Homework in Unwholesome Premises (S. 108)	
Cases of Infectious Disease notified in Homeworkers' Premises	
Orders prohibiting Homework in Infected Premises (S. 110)	
WORKSHOPS ON THE REGISTER (S. 131) AT THE END OF THE YEAR:—	
Important Classes of Workshops, such as Workshop Bakehouses, may be enumerated here {	
Workshops	42
Bakehouses	9
Laundries	53
Dressmakers	17
Total Number of Workshops on Register ...	121

* The Lists should be received twice in the year.



1909.

SUMMARY OF THE REPORTS
OF THE
DISTRICT MEDICAL OFFICERS OF HEALTH
IN THE
ADMINISTRATIVE COUNTY OF ESSEX,
For the Year 1908.

PREPARED FOR THE COUNTY COUNCIL

BY

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County Medical Officer of Health.*

Chelmsford :

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PREFACE.

*To the Chairman and Members of the Sanitary Committee of
the Essex County Council.*

GENTLEMEN,

I have the honour to submit to you the Fourteenth Annual Summary of the Reports of the Medical Officers of Health in the County. In a measure it is not complete since the Report from the Urban District of Burnham has not been received. A few statistics were received in time to be included, but some of these required revision and were returned for that purpose. After waiting until the beginning of June I was obliged to decide to prepare my Tables, etc., without including Burnham, and it is well that I did so as neither Tables nor Report have come to hand.* The omission cannot make any difference to the County statistics.

The Councils in a few of our smaller districts are still unable to see the advantage arising from the printing of their Medical Officer's reports; probably as a result these reports are very brief. The districts not causing the reports to be printed are:—

Braintree Urban
Harwich
Shoeburyness
Walton-on-the-Naze
Witham
Ongar Rural

The lamented death of Dr. Quennell, who held the office of Medical Officer of Health for the Ongar Rural District

*The report was received on July 1st.

Council probably accounts for their report not having been printed. It necessarily contains only statistical information.

Favourable as were the statistics for 1907, those for the last year are even more favourable, and there is little doubt that Essex is one of the healthiest, if not the healthiest county in England.

This satisfactory condition must be, in some measure, due to the character of the Sanitary Administration. In many districts there is no doubt room for much improvement, but on the whole the conditions which prevail, as indicated by the low mortality from infectious diseases, from phthisis, and from all causes combined, must be satisfactory.

We are now entering upon a new era. Our ideas as to the relative importance of factors affecting the public health are undergoing a change. Attention to sewers and drains, to water supplies, to systems of refuse removal and disposal, and to outbreaks of infectious disease, no longer constitutes the chief duty of the Medical Officer of Health. The great attention which has been paid to them in the past has produced such excellent results that conditions are now changed and other matters pertaining more to the individual unit are assuming greater importance. Beginning with watchful care over the mother before the child is born, care is to be given to afford the infant when born the best possible chance of living and thriving. When it has escaped the dangers of infancy it will be attended to through the whole of its school period, and when later it enters the factory or workshop care will be taken to secure such conditions of labour as will prevent phthisis and similar diseases, and the evils attendant upon overcrowding, upon the breathing of vitiated air, and from too long continued strain, etc. Even a certain amount of worry and anxiety will be removed, as the individual will have the knowledge that there is an old age pension to look forward to. If attention to all these details produces as marked a change in the next half century as has resulted from the sanitary improvements of the

past 50 years, old age will become the chief cause of death and the annual sum required to pay the old age pensions will be an amount which was never contemplated when these were inaugurated.

Fresh duties are being placed upon the Medical Officer of Health year after year, and it is becoming obvious that these can rarely be discharged efficiently by men engaged also in private practice. Where a single district is not sufficiently large to support a "whole time" officer, districts will have to be combined, and the Local Government Board has already suggested several such combinations in this County.

The existing officers have done good work, and have always shewn a keen interest in the sanitary condition of their districts. I am greatly indebted to them for their courtesy and willingness to assist me on all occasions.

JOHN C. THRESH.

CHELMSFORD,

June 22nd, 1909.

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SECTION I.

POPULATION OF THE COUNTY.

The difficulty in estimating the population of the County increases each year as the date of the last census recedes, but I have no reason to think that there is any error which will materially affect the statistics based thereon.

The populations of the Urban and Rural Districts respectively in 1891 and 1901 were as under, and the population in the middle of 1903 calculated therefrom will be seen to be somewhat higher than the totals given by the Medical Officers of Health. As these latter are more likely to be correct they have been taken as the basis for calculating the Death-rates, Birth-rates, etc.

		Population 1891 Census.		Population 1901 Census.
Urban Districts	...	345,679	...	576,508
Rural Districts	...	232,792	...	240,132
<hr/>				
Administrative County		578,471	...	816,640
<hr/>				
		Calculated Population, 1908.		Population 1908 based on M.O.H. Returns.
Urban Districts	...	835,320	...	791,277
Rural Districts	...	245,600	...	250,179
<hr/>				
Administrative County		1,080,920	...	1,041,456

The increase of population during the year according to the Medical Officers' estimates is, in the Urban Districts 34,657, whilst in the Rural Districts there has been a decrease

of 502. This is due to the fact that a considerable population from the Chelmsford Rural District has been added to the Borough of Chelmsford. The nett increase in the County population is 34,155. Nearly the whole of this increase is in Southend and the large Urban Districts adjoining the Metropolis.

THE BIRTH-RATE.

The number of births registered in the County was 24,954, as against 25,258 in the previous year. 19,000 births occurred in the Urban Districts and 5,954 in the Rural Districts. The Birth-rates are therefore as follows :—

TABLE I.
BIRTH-RATES PER 1,000 POPULATION.

	1908.	1907.	Mean 1890-1906
Urban Districts... ..	24·0	25·7	29·9
Rural Districts	23·8	23·2	25·2
Administrative County ...	24·0	25·1	28·2
England and Wales	26·5	26·3	29·25

That the Birth-rate is markedly decreasing, especially in the Urban Districts, is manifest, but as the Birth-rate is more than double the Death-rate the seriousness of the fact is heavily discounted. As the increase of population due to births is 24,954, whereas the actual increase is 34,157, there has evidently been an influx of 9,203 persons from districts outside. Reference has been made in many previous reports to the necessity for certain corrections in order to enable the birth-rates in the various districts to be compared. This correction is made for certain districts in the following Table :—

TABLE II.

CORRECTED BIRTH-RATES FOR 1908.

	Crude Birth-rate.	Correction Factor.	Corrected Birth-rate.
East Ham	24·7	·786	19·4
Walthamstow	26·5	·8326	22·1
Leyton	25·3	·9165	23·2
Urban Districts of Essex	24·0	·9146	21·95
Rural Districts ,,	23·8	1·1886	28·3
Administrative County of Essex ..	24·0	·9810	23·35
England and Wales	26·5	1·000	26·5

This Table shews that in proportion to the number of women of marriagable age the Birth-rate in such a working class population as that of East Ham is lower than in the county generally, and that in the Rural Districts the Birth-rate is much higher than in the Urban areas. Whatever cause is operative in reducing the Birth rate, its effects are more manifest in the towns than in the villages, and it is as operative amongst working class populations as amongst those of higher social grade. In England and Wales last year the Birth-rate slightly increased, but in Essex there was a most marked decrease.

DEATH-RATE.

During the year 11,105 deaths were recorded in the various districts, but 241 deaths occurred in the County Asylum, which do not appear in the local returns, making a total of 11,346. 7,923 deaths occurred in the Urban Districts and 3,179 in the Rural Districts. In the following Table these have been corrected, *pro rata*, for the asylum deaths.

TABLE III.
DEATH-RATES PER 1,000 POPULATION.

	1908.	1907.	Mean 1890-1906.
Urban Districts	10·25	10·9	13·8
Rural Districts	12·95	13·2	14·6
Administrative County ...	10·9	11·45	14·0
England and Wales ...	14·7	15·0	17·2

The Death-rate not only continues low but continuously decreases. It is almost inconceivable that such a low rate should continue much longer as to maintain it indefinitely would mean that the average age at death would approach 100 years.

For comparative purposes the Death-rates for other English Counties are given below. These are taken from the returns of the Registrar General for 1908.

Administrative County of Essex ... 10·9

London ...	13·8	Cambridgeshire ...	14·2
Surrey... ..	12·7	Essex	11·9
Kent	12·2	Suffolk... ..	14·6
Sussex... ..	12·5	Norfolk	14·5
Hampshire ...	13·0	Wiltshire	12·5
Berkshire ...	12·7	Dorsetshire ...	12·9
Middlesex ...	11·8	Devonshire ...	14·7
Hertfordshire ...	13·1	Cornwall	14·6
Buckinghamshire	12·5	Somersetshire ...	13·6
Oxfordshire ..	14·0	Gloucestershire ...	13·5
Northamptonshire	11·9	Herefordshire ...	14·4
Huntingdonshire	14·1	Shropshire	14·7
Bedfordshire ...	13·2	Staffordshire ...	15·3

Worcestershire ...	13·2	Cheshire ...	14·7
Warwickshire ...	15·4	Lancashire ...	16·9
Leicestershire ...	13·2	Yorkshire ...	15·6
Rutlandshire ...	14·6	Durham ...	16·8
Lincolnshire ...	14·8	Northumberland	16·4
Nottinghamshire	15·1	Cumberland ...	15·7
Derbyshire ...	14·1	Westmoreland ...	13·1

From these Death-rates it is seen that the County of Essex as a whole has the lowest Death-rate of any county in England with the exception of Middlesex, which is approximately the same, but that the Administrative County has a lower Death-rate than any English County, being even below those for the favourite residential counties of Surrey, Kent, Hampshire, etc. When corrected for age and sex distribution in order to compare the Rural with the Urban Death-rate and both with that for England and Wales the results are as under :—

TABLE IV.

DEATH-RATES PER 1,000 POPULATION.

	Crude Death-rate.	Correction Factor.	Corrected Death-rate.
Urban Districts... ..	10·25	1·036	10·6
Rural Districts	12·95	·8597	11·15
Administrative County	10·9	·9767	10·65
England and Wales	14·7	1·000	14·7

The correction factor for the largest towns having been worked out, the Death-rates can be rendered comparable, but the corrections do not markedly affect the results.

TABLE V.

DEATH-RATES PER 1,000 POPULATION.

(Not including deaths in the County Asylum.)

				Crude Death-rate.	Correction Factor.	Corrected Death-rate.
East Ham	...	...	...	9·9	1·0764	10·65
Walthamstow	...	...	...	9·6	1·0578	10·15
Leyton	...	...	...	9·8	1·0294	10·1
Ilford	...	...	...	8·9	1·0790	9·6
Southend	...	...	...	9·4	1·0662	10·2
Colchester	...	...	...	11·65	1·0606	12·3
Barking	...	...	...	12·4	1·0600	13·15

Most of these are extraordinarily low Death-rates and the only conclusion which can be drawn from them is that the people who inhabit these large towns must be living under exceedingly good sanitary conditions.

The highest Death-rates (*vide* Table XV.) were recorded in the smaller and much older towns.

Braintree...	15·9	Harwich ..	16·2
Halstead ...	15·6	Maldon ...	15·6

Saffron Walden, however, is an exception, the Death-rate only being 12·0

The cause of the excessive mortality in these older towns requires the very careful study of the respective Medical Officers of Health.

In the Rural Districts the Death-rates have varied from 10·1 in the Romford Rural to 17·3 in Bumpstead Rural, and it is noteworthy that whilst Saffron Walden Borough had a low Death-rate that for the surrounding Rural District was comparatively high, 15·9.

INFANTILE MORTALITY.

The infantile mortality was again very low. 1,765 children under 1 year of age died in the Urban Districts and 452 in the Rural areas, or a total of 2,217 for the whole county. As there were 24,954 births the deaths per 1,000 births were 89, which is probably the lowest rate hitherto recorded, and is far below the average.

TABLE VI.

DEATHS OF INFANTS PER 1,000 BIRTHS.

	1908.	1907.	Mean 1900-6.
Urban Districts.. ...	93	93	133
Rural Districts	76	83	102
Administrative County ..	89	90	123
England and Wales ...	121	118	148

The low rate prevalent throughout England and Wales indicates that the cause was one which affected the whole country, and there is also no doubt that it was in some way connected with the weather during the summer and autumn. The earth temperature was low as the summer was cold, but the nature of the connection between a low earth temperature and the mortality amongst infants from diarrhoeal disease is not yet ascertained. The latest theory is that with a high earth temperature house flies are very prevalent, whereas in cold summers they are far fewer in number, and that these flies contaminate milk and possibly other articles of food with the bacteria which give rise to intestinal irritation. Medical Officers of Health might do much to test this theory by observing whether infantile diarrhoea is generally more prevalent in areas where flies abound than in other localities. My limited observations have not led me to conclude that such is the case, but the subject is well worth investigation.

The following Table shews the proportion of infants dying at certain ages and from various causes out of each 100 dying before reaching the age of one year.

TABLE VII.
INFANTILE MORTALITY.

	Urban Districts.	Rural Districts.
Dying before attaining the age of 1 week ..	24·5	30·1
„ „ 1 month ...	42·0	43·9
„ „ 3 months ...	60·4	60·0
„ „ 6 months ...	78·3	75·5
Dying on account of Prematurity of Birth ...	19·2	25·3
„ Congenital Defects ...	6·2	5·2
Dying from Convulsions	6·2	8·7
„ Diarrhœa	11·1	6·5
„ Debility (wasting)	16·4	11·1

During the first week after birth a larger proportion of children die in the Rural Districts than in the Urban and the excess continues until the age of 1 month. After that age more infants die in the Urban Districts.

In the Rural Districts there are more premature births, which doubtless accounts for the excessive mortality during the first few weeks. In the Urban Districts far more die from diarrhœa and wasting, both doubtless due in a great measure to improper and careless feeding.

Tubercular diseases caused 71 deaths amongst infants in the Urban Districts and 17 in the Rural, the proportions per hundred deaths being 4·1 and 3·7 respectively not a very marked difference, but in favour of the rural areas. In the whole county 12 infants died from injuries received during birth, and of these the larger proportion occurred in the rural

districts. Thirty deaths occurred in the towns from overlaying and only 3 in the country areas.

The whole of the results in Table VII. indicate that the children born to parents in the Rural Districts are not more lusty than those born to parents in the towns. In fact the opposite is probably the case, but greater care is taken with the infants in the country and consequently a much large proportion of them attain the age of one year.

The highest Infantile Mortality was recorded in some of the smaller Urban Districts, whilst the largest towns had, generally speaking, very low rates.

Towns with high Infantile Mortality.		Towns with low Infantile Mortality.	
Buckhurst Hill...	188	Leyton	... 79
Halstead	... 178	Ilford	... 80
Harwich	... 137	Grays	... 89
Saffron Walden...	125	Walthamstow	101
		East Ham	... 104

There were not such extreme variations in the Rural Districts, but in Bumpstead a very high rate was recorded, 134, whilst in Dunmow, Ongar, and Stansted the rate was below 60. (*Vide* Table XV.)

BARKING. The Notification of Births Act has been in force throughout the year, and has been generally well received, but one or two medical men omit to notify births occurring in their practice. The lady inspector visits and advises the parents. Dr. Fenton established a small depot and supplied a dried milk, "Glaxo," and was very satisfied with the result. The death-rate amongst the infants fed on "Glaxo" was 4·7 per cent., whereas the general death-rate amongst infants was 11·7. The numbers fed on "Glaxo" was small but as all the infants "brought to the depot were suffering from some defect, either in themselves or the mother, or were weakly, or the natural food was not available, the result is *primâ facie* a good one. The result is the more encouraging as epidemic diarrhœa was very prevalent and very fatal during the summer quarter."

Half the deaths of infants was due to causes indicating the inability of the babies to digest and assimilate their food. The work of the Lady Visitor and the provision of suitable milk is reducing the mortality amongst infants. Dr. Fenton's report on this subject is well worth study and his example might be followed in many towns with great advantage.

COLCHESTER. In this borough, although the infantile mortality is low, the deaths of infants under the age of one month is above the average, and is mainly due to premature birth, atrophy, and marasmus. "Most of these causes are ante-natal in origin and due to various factors, only some of which are amenable to the influence of sanitation in its broadest sense." Special supervision is exercised over houses containing babies and certain enquiries made. The crusade against the feeding bottle with long tubes has resulted in a great decrease in the number of such now used. Over 70 per cent. of the infants under six months are now breast-fed.

EAST HAM. Diarrhœa, premature birth, and debility cause more than half the deaths which occur under 1 year, and the first is almost entirely confined to hand-fed children living amidst dirty surroundings. The Notification of Births Act has not been adopted. The Medical Officer of Health thinks that the adoption of the Act and the employment of a Health Visitor would have a very beneficial effect.

GRAYS. The Notification of Births Act has been adopted (November) and a District Nurse appointed to visit, etc. The results will be watched with interest.

ILFORD. The report contains an interesting coloured diagram shewing the diseases which caused the greatest infantile mortality during the year. These causes are mostly preventible, and the adoption of the Notification of Births Act and employment of a Health Visitor is recommended.

LEYTON. The Medical Officer of Health finds that half the infantile mortality is due to ante-natal causes and not to improper feeding, etc., and the Council has decided not to

adopt the Notification of Births Act. The Medical Officer of Health quotes certain resolutions passed by a conference on infantile mortality held during the year in London. Most of the suggestions therein contained are embodied in the Children Act 1908.

SOUTHEND. "Enquiries into infant deaths still show errors in dieting and management on the part of the mothers, and I am strongly of opinion that the same great benefit which has been experienced in other towns from the work of a Health Visitor would follow the appointment of a similar officer in this district."

WALTHAMSTOW. The Notification of Births Act has not been adopted but a Lady Inspector and Health Visitor is engaged in giving lectures at Mothers' Meetings, visiting parents, etc. The results are apparently favourable. The mortality amongst infants in St. James' Street and Wood Street Wards is much higher than in the other wards.

WOODFORD. The Notification of Births Act was adopted and a Lady Health Visitor appointed. This lady resigned at the end of 10 months, and when her successor was appointed it was decided not to insist upon the early notification of births. This the Medical Officer of Health thinks is a great mistake, and in a special report he shews that during the period the first Health Visitor was at work and births were duly notified the infantile mortality was below half the average.

WANSTEAD. Remarking upon the low infantile mortality in this district the Medical Officer of Health says that if a Health Visitor had been appointed the decrease would have been attributed to her exertions.

In several other reports reference is made to the distribution of handbills during the summer when diarrhœa is usually prevalent amongst infants. In the reports of the Medical Officers of Health for the Rural Districts few references are made to the subject of infantile mortality, and apparently the Notification of Births Act has not been adopted by any Rural Authority. It is doubtful whether its adoption would

lead to results commensurate with the expense, as the notification of births would be useless unless followed up by visits of a specially trained female Inspector. Still one would like to find a Council sufficiently enthusiastic to adopt the Act and appoint a Health Visitor, and to note the results of a few years labour. An experiment continuing for less than five years would not permit of safe conclusions being based on the results. Although not referred to in the reports there is no doubt that in several districts something is being done by the distribution of leaflets on infant feeding, etc. The greatest benefit, however, may be expected in our Rural Districts from the teaching of Hygiene in the schools, especially if suitable classes are held for the elder girls.

As remarked in the last annual summary, ante-natal conditions have more influence in Rural Districts than in Urban, and this serious condition appears to me to be due to the fact that the strongest and healthiest adults leave our villages, whilst the weakest and the ailing remain behind to become the parents of our future rural population.

DEATHS AT VARIOUS AGE GROUPS.

The above remarks about the healthier condition of rural communities and of the difference in age distribution is borne out by the following Table, shewing the proportion of deaths which occur in the different districts at different age periods.

TABLE VIII.

				Urban Districts.	Rural Districts.
Percentage of deaths under 1 year	...	...	...	22·3	14·3
„ „ between 1 and 5 years	...	...	...	10·3	5·7
„ „ „ 5 and 15 years	...	...	...	4·6	4·7
„ „ „ 15 and 25 years	...	...	...	3·9	3·9
„ „ „ 25 and 65 years	...	...	...	30·7	27·1
„ „ over 65 years	...	...	...	28·2	44·3

The Table shews that amongst children under 5 years the mortality is enormously greater in the towns than in the country districts, from 5 to 25 years the mortality is about the same, but during the most productive period between 25 and 65 years the mortality is again higher in the towns, the final result being that in the towns only 28·2 per cent. reach the age of 65, whereas in the rural districts 44·3 per cent. reach this age. Children therefore have a much greater chance of living, and adults have a much greater chance of reaching the allotted span, if they live in the country than if they live in the towns.

The other advantages of a country life are so obvious as to require no further comment.

DEATHS FROM VARIOUS CAUSES.

1. CANCER.

The following Table gives the total number of deaths from Cancer in the County for each year from 1900 and Table X. gives the death-rates from this disease for the past 47 years.

TABLE IX.

DEATHS RECORDED FROM CANCER SINCE 1900.

	Rural Districts.	Urban Districts.	Administrative County.
1900	215	312	527
1901	220	344	562
1902	266	316	582
1903	246	367	613
1904	213	433	646
1905	245	476	721
1906	226	504	730
1907	249	369	618
1908	251	561	812

The death-rate in the Rural Districts was 1·0 and in the Urban Districts ·71 per 1,000 population ; corrected for the age and sex distribution so as to make the rates comparable with that for England and Wales we have :—

Corrected Rural Death-rate	...	...	·771
„ Urban Death-rate	...	..	·823
„ Rate for Administrative County	..		·81
England and Wales (1907)	...	...	·90

The mortality from Cancer in 1907 was lower than for many preceding years. This year it is higher than in any previously recorded year, and adds to the evidence of the increasing prevalence of and mortality from this dread disease.

TABLE X.

CANCER DEATH-RATE PER 1,000 POPULATION.

		Admin. County.		England & Wales.
1871-80	...	·48	...	·47
1881-90	...	·54	...	·59
1891-1900	...	·66	...	·75
1901-1905	...	·71	...	·86
1906	...	·75	...	·92
1907	...	·61	...	·90
1908	...	·81	...	Not yet published

2. TUBERCULAR DISEASES.

In the Urban Districts 605 persons died from Phthisis and 273 from other Tubercular diseases. In the Rural Districts there were 191 deaths from Phthisis and 98 from other Tubercular diseases. The death-rates compared with previous years were as under :—

TABLE XI.

DEATH-RATE PER 1,000 POPULATION.

	From Phthisis.			From other Tubercular Diseases.		
	Essex Urban.	Essex Rural.	England and Wales.	Essex Urban.	Essex Rural.	England and Wales
1901-5	·87	·83	1·21	·41	·365	·525
1906	·785	·65	1·15	·45	·34	·49
1907	·85	·81	1·14	·43	·32	·46
1908	·76	·76	...	·34	·39	...

The Phthisis death-rate for the County is very low, being ·76 against an average of about 1·15 for England and Wales. The general tendency to decrease continues, but in the Rural Districts tubercular diseases other than Phthisis do not shew any diminution of recent years.

The low Phthisis death-rate in a County with such a large population living upon land only a few feet above sea level is somewhat remarkable, but apparently efficient drainage and a good water supply will render a marsh salubrious.

During the year I addressed a series of questions to the various Medical Officers throughout the County to ascertain exactly what steps were being taken to combat Tuberculosis in their respective districts. Replies were received from all districts, save Braintree Urban and Burnham, and these replies are appended.

The results may be tabulated as follows :---

	Rural Districts.		Urban Districts.	
Number of replies received ...	18	..	31	
Number of districts with voluntary notification ...	3	...	10	
Number of districts with compulsory notification ...	0	...	0	

	Rural Districts.		Urban Districts.
Length of time during which there has been notification	4 to 5 years		1½ to 7 years
Proportion of cases notified ...	None	...	0 to 75 %
Disinfection carried out after removal or death of patient ...	7	...	16
... }	9, in others	12, in others where	
... if requested.		requested.	
No disinfections carried out ...	4	...	3
Extent of disinfection—			
Whole House ...	1	...	—
Room occupied...	13	...	31
Bedding removed to dis- infect ...	?	...	4
Other steps taken—			
Visits by woman inspector	—	...	1 (Barking)
Popular lecture ...	—	...	1 (Colchester)
Notices in public buildings	1	...	?
Cards, etc., distributed ...	2	...	8
Disinfectants given ...	1	...	—
Free Bacteriological diagnosis ...	2	...	3 ?
Pocket spittoons supplied	—	...	1 (Woodford)
Nothing more done ...	12	...	17

Two Medical Officers of Health stated that they did not regard Phthisis as being infectious.

An attempt was also made to ascertain what Boards of Guardians were doing for Poor Law cases, but very little information was obtainable, many of the Poor Law Medical Officers never even acknowledging my letter of inquiry. Apparently little special interest is taken in the cases, as I know

from enquiries made elsewhere that where no replies had been received no special provision is or was made for phthisical cases. In a few instances wooden or canvas shelters have been erected in the workhouse grounds, in one or two other cases the phthisical patients are kept apart, as far as possible, from the other inmates. Apparently comparatively few consumptive patients drift into the Essex workhouses. It is difficult to conceive that the treatment of advanced cases in the workhouses has had much effect in Essex in decreasing the mortality from Phthisis, but far more segregation has occurred amongst those who have not entered the workhouses, either in public or private institutions, or in home shelters.

From the commencement of the present year Poor Law cases are compulsorily notifiable and the Local Government Board has issued a memorandum of instructions and recommendations to Sanitary Authorities and Medical Officers of Health, which it is hoped will be generally accepted and acted upon.

The districts with the highest phthisis death-rates during the year were Bumpstead Rural 2·1, Barking 1·2, Chingford 1·3, Leigh 1·6, Billericay, Shoebury, Southend, Witham, and Braintree Rural, each 1·1, and Saffron Walden 1·0. Low rates were recorded in most of the large Urban Districts, Leyton ·8, Walthamstow ·7, East Ham ·7, and Ilford ·5. There is no public sanatorium in the County. There is, most unfortunately, a general impression that the erection and administration of such sanatoria would be a great burden upon the rates.

3. DEATHS FROM CERTAIN OTHER DISEASES.

(A) NON-INFECTIOUS.

Deaths from diseases of the heart and lungs are always very numerous, but the different proportions in the Urban and Rural Districts are very marked.

TABLE XII.

		Bronchitis.		Pneumonia.		Heart Disease.	
		Urban.	Rural.	Urban.	Rural.	Urban.	Rural.
Deaths per 1,000 population	...	·84	1·07	·58	·44	·74	1·55
Percentage of total deaths	...	8·3	8·4	5·7	3·5	7·4	12·2

Pneumonia appears to be a much more frequent cause of death in Urban Districts than in Rural, and Heart Disease is the most common cause of death in the Rural Districts. The latter is doubtless due to the fact that so many aged people die from heart failure.

(B) INFECTIOUS DISEASES.

The following Table gives the number of deaths which have occurred in both the Urban and Rural Districts and in the Administrative County, and Table XIV. gives the death-rates calculated therefrom. The rates for England and Wales are added for purposes of comparison.

TABLE XIII.

DEATHS FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES.

		Urban Districts.	Rural Districts.	Administrative County.
Small-pox	...	0	0	0
Measles	...	142	33	175
Scarlet Fever	...	60	20	80
Whooping Cough	...	100	41	141
Diphtheria	...	158	54	212
Typhoid Fever	...	37	8	45
Puerperal Fever	...	20	8	28
Epidemic Diarrhoea	...	252	29	281
Totals	...	769	193	962

The total deaths last year (1907) from all these diseases was 1,079.

TABLE XIV.

DEATH-RATES PER 1,000 POPULATION FROM EACH OF THE SEVEN PRINCIPAL ZYMOTIC DISEASES, 1908.

	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Fevers.	Diarrhoea.	Totals
Urban Districts ...	·00	·18	·08	·13	·20	·07	·32	·97
Rural Districts ...	·00	·13	·08	·16	·22	·065	·12	·77
Administrative County	·00	·17	·08	·135 $\frac{1}{4}$	·205	·07	·27	·92
England and Wales ...	·00	·22	·08	·15	·27	·07	·50	1·29
Administrative County, Average 1890-1907 ...	·015	·31	·105	·26	·25	·15	·60	1·44

In no case has the mortality from any of these diseases exceeded that for England and Wales and the total rate is considerably below that for the whole country. The County rate is the lowest hitherto recorded and tends to indicate that the sanitary administration is improving and compares very favourably with that of other counties.

High death-rates from the infectious diseases occurred in the following districts :—Harwich 2·4, Halstead 2·3, Barking 2·2, Wivenhoe 1·6, Romford Rural 1·6, Orsett 1·3.

In subsequent sections the prevalence of these diseases in the different sanitary districts will be dealt with.

Influenza is now so uniformly recorded as a cause of death, and is so markedly on the increase, that it may be interesting to record the fluctuations of recent years.

INFLUENZA DEATHS AND DEATH-RATES.

		No. of Deaths.		Death-rate.
1904	...	88	...	·10
1905	...	113	...	·125
1906	...	148	...	·16
1907	...	170	...	·17
1908	...	207	...	·20

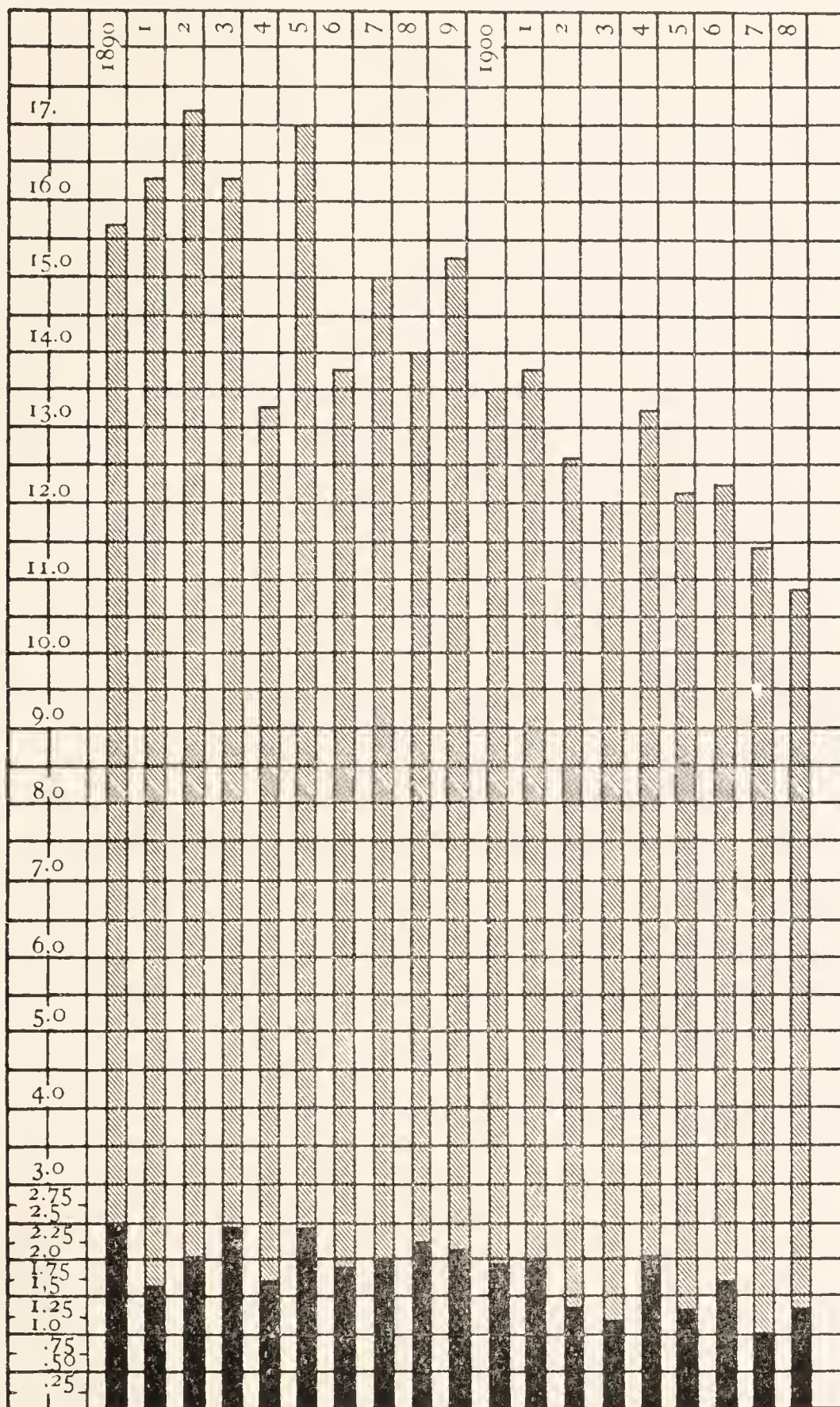
The distribution does not appear to be uniform as a greater proportion of deaths occurred in the Rural Districts, the death-rates being for 1908 :—

In the Rural Districts ... ·28 per 1,000 population

In the Urban Districts ... ·17 „ „

The death-rate now from Influenza is twice as great as it was five years ago.

The appended diagram shews the marked decrease in the death-rate from all causes and from the seven principal zymotic diseases since 1890.



COUNTY DEATH RATES.

Black from the seven principal Zymotic Diseases.

Shaded from "All other Causes."

BIRTH-RATES AND DEATH-RATES.
TABLE XV.

	URBAN DISTRICTS.	Birth-rate.	Infantile Mortality	Death-rates from			Medical Officers of Health.
				All causes.	Seven principal Zymotic Diseases	Phthisis.	
1	Barking	30·8	117	12·4	2·2	1·2	C. F. Fenton, L.R.C.P., M.R.C.S.
2	Braintree	21·01	97	15·9	·9	·7	Percy R. Stevens, L.R.C.P., M.R.C.S.
3	Brentwood	16·7	61·5	7·8	·4	·12	S. Frazer, L.R.C.P., L.R.C.S.
4	Brightlingsea	15·5	90	10	·4	·6	E. P. Dickin, M.D., C.M.
5	Buckhurst Hill	20	188·6	14·3	1·3	·6	Chas. R. Dykes, M.R.C.S., L.R.C.P.
6	Burnham	20·1?	30?	10·1?	?	?	W. C. P. Smith, M.R.C.S., L.R.C.P., D.P.H.
7	Chelmsford	22·93	67·64	10·53	·52	·52	H. W. Newton, M.R.C.S., L.R.C.P., D.P.H.
8	Chingford	24·4	49	9·5	·3	1·3	G. F. Fulcher, M.B., C.M.
9	Clacton	21·14	118·3	12·88	·8	·6	Jno. W. Cook, M.D.
10	Colchester	23·55	90	11·65	·9	1·1	Wm. G. Savage, M.D., B.Sc., D.P.H.
11	East Ham	24·7	104	9·9	1·4	·7	Geo. Sowden, M.D., D.P.H.
12	Epping	21·4	75·2	10·3	·2	·7	Trevor Fowler, L.R.C.P. & S.I., D.P.H.
13	Frinton	22	0	5·33	0	0	H. W. Godfrey, M.D.
14	Grays	28·1	89	9·3	·8	·6	John A. Ward, M.D.
15	Halstead	16·55	178·2	15·57	2·3	·8	C. Gordon Roberts, M.A., M.B., B.C.
16	Harwich	29·1	137·3	16·2	2·4	·35	H. Gurney, M.R.C.S., L.R.C.P.
17	Ilford	23·2	79·8	8·9	·51	·47	C. F. Stovin, M.A., L.S.A., D.P.H.
18	Leigh-on-Sea	20·9	82·7	10	·5	1·6	W. D. Watson, M.R.C.S., L.R.C.P.
19	Leyton	25·3	78·8	9·8	·8	·8	J. F. Taylor, M.R.C.S., D.P.H.
20	Loughton	17·4	87·3	7·3	·5	·7	A. Butler Harris, M.A., M.B., B.Ch. Oxon.
21	Maldon	24·6	50	15·6	·7	·7	H. Reynolds Brown, M.D., C.M.
22	Romford	25·9	90	11·5	·9	·6	A. Wright, M.R.C.S.
23	Saffron Walden...	17·5	125	12	0	·8	W. Armistead, M.B., F.C.S.,
24	Shoeburyness	34·29	50·6	6·51	·2	1·1	M. H. Raper, M.D., D.P.H.
25	Southeast-on-Sea	19·1	93·6	9·39	·66	1·1	C. G. Pugh, M.D., D.P.H.
26	Waltham Holy Cross	22·96	125·7	10·54	·4	·4	J. Damer-Priest, M.R.C.S., D.P.H.
27	Walthamstow	26·48	100·8	9·6	·8	·7	J. J. Clarke, L.R.C.P.I., D.P.H.
28	Walton-on-the-Naze	23·93	76·92	11·04	0	·4	Jno. W. Cook, M.D.
29	Wanstead	19·7	60·7	7·9	·7	·3	F. Argles, M.R.C.P.Ed., M.R.C.S.
30	Witham	22·2	37·5	10·2	·55	1·1	K. C. Gimson, M.B., B.Ch.
31	Wivenhoe	21	128·6	10·6	1·6	0	G. Pender-Smith, L.S.A.
32	Woodford	20·2	63·2	7·5	·35	·2	W. G. Groves, M.R.C.S.
Total		24·0	93	10·25	·97	·76	

BIRTH-RATES AND DEATH-RATES.
TABLE XV.—Continued.

	RURAL DISTRICTS.	Birth-rate.	Infantile Mortality	Death-rates from			Medical Officers of Health.
				All causes.	Seven principal Zymotic Diseases.	Phthisis.	
1	Belchamp	18·6	77·7	14	·4	·2	J. Sinclair Holden, M.D.
2	Billericay	26·9	68·5	12·7	·5	1·1	D. Wells, M.B., CH.B.
3	Braintree	20·02	98·3	14·3	·55	1·1	H. G. K. Young, M.R.C.S., L.R.C.P.
4	Bumpstead	22·6	134	17·3	·4	2·1	Wm. Armistead, M.B., F.C.S.
5	Chelmsford	23·9	69	13·9	·67	·9	John C. Thresh, M.D., D.Sc., D.P.H.
6	Dunmow	22·15	55·5	14·5	·45	·88	Edmund E. Goodbody, M.D.
7	Epping	20·2	102·8	11·4	·43	·5	Trevor Fowler, L.R.C.P. & S.I., D.P.H.
8	Halstead No. 1.	22·56	94	14·05	·42	·8	J. Henry Ashworth, M.D.
9	Halstead No. 2.	19·31	63·6	11·06	1·05	·52	J. B. Bromley, M.R.C.S.
10	Lexden and Winstree	21·85	56·4	11·86	·6	·7	Jno. W. Cook, M.D.
11	Maldon	24·4	61	12·7	·2	·8	John C. Thresh, M.D., D.Sc., D.P.H.
12	Ongar	23·5	56	13·1	·5	·5	W. R. S. Roberts, M.B., Ch.B.
13	Orsett	30·41	87	12·9	1·3	·8	Rea Corbett, M.R.C.S., L.R.C.P.
14	Rochford	26·9	90·1	11·75	·6	·3	F. Dorrell Grayson, M.R.C.S.
15	Romford	26·7	87	10·1	1·6	·77	Alfred Wright, M.D.
16	Saffron Walden	22·2	103	15·9	·9	·1	Wm. Armistead, M.B., F.C.S.
17	Stansted	21·4	54	12·8	·43	·29	R. A. Dunn, M.D., D.Hy.
18	Tendring	23·5	67·4	12·7	·63	·67	Jno. W. Cook, M.D.
	Total	23·8	76	12·95	·77	·76	

SECTION II.

PREVALENCE OF INFECTIOUS DISEASE.

TABLE XVI.

TOTAL NUMBER OF CASES OF INFECTIOUS DISEASES
NOTIFIED DURING THE 10 YEARS, 1899-1908.

Year.	Small-pox	Scarlet Fever.	Diphtheria and Membranous Group.	Fevers—Typhoid and Continued.	Puerperal Fever.	Erysipelas.	Totals.	Rate per 1,000 population.
1899	3	2,769	1,712	874	52	803	6,213	7·9
1900	18	2,702	2,395	840	54	718	6,718	8·3
1901	227	2,961	2,628	790	40	716	7,362	9·1
1902	1334	3,251	2,017	987	44	857	8,477	9·9
1903	96	2,528	1,659	589	42	750	5,664	6·4
1904	112	3,534	1,764	453	51	812	6,726	7·4
1905	3	4,563	1,453	398	45	863	7,325	7·8
1906	0	4,434	1,869	366	56	833	7,558	7·8
1907	0	5,138	1,918	243	41	758	8,098	8·0
1908	3	4,490	1,767	266	39	738	7,303	7·0
Average ...	180	3,860	1,918	580	46	784	7,844	8·0

A smaller proportion of cases has only once previously been recorded, in 1903, when only 6·4 per 1,000 of the population suffered from any of these infectious diseases. Scarlet Fever appears to have attained its maximum in 1907 and is now on the decline. The Diphtheria wave is not so

DISTRIBUTION THROUGHOUT THE COUNTY OF COMPULSORILY
NOTIFIABLE INFECTIOUS DISEASES.

TABLE XVII.

	No. of Cases Notified.	No. per 1,000 In- habitants.	Diseases most prevalent.
Urban Districts.			
Barking	246	8·2	Scarlet Fever and Diphtheria
Braintree	28	5·2	Scarlet Fever
Brentwood	54	6·9	"
Brightlingsea	9	1·8	"
Buckhurst Hill	5	·9	Erysipelas
Burnham ... ..	...	...
Chelmsford	37	2·1	Scarlet Fever and Diphtheria
Chingford	42	6·2	Scarlet Fever
Clacton	50	6·3	"
Colchester	203	4·9	"
East Ham	1633	11·4	Scarlet Fever and Diphtheria
Epping	53	12·2	Scarlet Fever
Frinton	4	2·6	Erysipelas
Grays	65	4·1	Scarlet Fever
Halstead	21	3·4	"
Harwich	30	2·6	Scarlet Fever and Enteric
Ilford	679	8·9	Scarlet Fever and Diphtheria
Leigh-on-Sea	7	1·1	Scarlet Fever
Leyton	925	7·7	Scarlet Fever and Diphtheria
			2 Smallpox
Loughton	15	2·5	Scarlet Fever
Maldon	60	10·5	Diphtheria and Scarlet Fever
Romford	173	16·1	Scarlet Fever ; 1 case of Small-pox
Saffron Walden	7	1·09	Erysipelas
Shoeburyness	12	2·6	Enteric
Southend-on-Sea	295	5·1	Scarlet Fever and Diphtheria
Waltham Holy Cross	33	4·7	Scarlet Fever
Walthamstow	1014	7·7	"
Walton-on-the-Naze	23	1·05	"
Wanstead	51	4	"
Witham	12	3·3	Diphtheria
Wivenhoe	8	2·6	"
Woodford	91	4·6	Scarlet Fever
Total	5885	7·4	
Rural Districts.			
Belchamp	17	3·5	Scarlet Fever
Billericay	108	6·4	"
Braintree	59	3·2	"
Bumpstead	11	4·7	Diphtheria
Chelmsford	56	2·7	Scarlet Fever
Dunmow	71	4·6	"
Epping	86	6·1	"
Halstead, No. 1	16	3·4	Erysipelas
Halstead, No. 2	15	2·6	"
Lexden and Winstree	81	4	Scarlet Fever and Diphtheria
Maldon	47	3·2	"
Ongar	107	9·9	Scarlet Fever
Orsett	217	9·3	Scarlet Fever and Diphtheria
Rochford	97	5·8	Scarlet Fever and Enteric
Romford	293	12·5	Scarlet Fever and Diphtheria
Saffron Walden	30	3·1	"
Stansted	20	2·9	Scarlet Fever
Tendring	87	3·9	Scarlet Fever and Diphtheria
Total	1418	4·5	

evident, but it appears to be on the ebb. Typhoid Fever is not cyclical and there has been a remarkable decrease of recent years. Puerperal Fever is not causing fewer deaths, notwithstanding the registration and supervision of midwives.

The number of cases notified in each district is given in Table XVII.

Table XXII. shews that most cases of infectious disease were notified in January, and the smallest number in June. The maximum incidence of Diphtheria and of Typhoid Fever occurred in October, and of Scarlet Fever in March.

SMALL-POX.

Three cases were notified, two in Leyton and one in Romford. One of the cases at Leyton was returned from the Metropolitan Asylums Board Hospital as not being Small-pox. The Romford case was a tramp admitted into the casual ward of the Union Workhouse. He was sent to the Small-pox Hospital (? West Ham).

The County has been practically free from the disease for some years, and as a good many children have not been vaccinated it is probable that there will be a recrudescence within the next two or three years. In all districts, but in the larger Urban areas more especially, some provision should be made for meeting emergencies. Many districts had entered into an arrangement with West Ham for the use of their hospital at Dagenham, but there are reasons for believing that the agreements have lapsed. Leyton now sends its cases to the Metropolitan Asylums Board's Hospital and pays 8/- per day per patient, but the arrangement is one which can be terminated at a very short notice and is not, therefore, very satisfactory. It would be well if every Medical Officer of Health gave this matter his attention and recorded in his next annual report the provisions which have been made to isolate cases of Small-pox should an outbreak occur.

SCARLET FEVER.

During the year 3,656 cases occurred in the Urban Districts and 834 in the Rural. 62 per cent. of the cases in the urban areas were removed to hospitals and 48 per cent. in the rural areas. The disease seems to have been of a rather more severe type in the rural areas as the case mortality was 2·4 per cent. against 1·7 per cent. for the towns.

The following Table shews the incidence of the disease in recent years, the case mortality, and the proportion of cases removed to hospital in the Urban and Rural Districts.

TABLE XVIII.

	Urban Districts.			Rural Districts.		
	Cases per 1 000 pop.	Deaths per 100 cases.	Per cent. removed to hosp'tal.	Cases per 1,000 pop.	Deaths per 100 cases.	Per cent. removed to hospital.
1901	4·3	1·4	39	2·9	1·5	28
1902	4·2	1·3	?	2·8	2·0	?
1903	3·3	2·0		1·7	2·6	?
1904	4·3	1·8	52	2·7	1·8	49
1905	5·3	1·7	44	3·7	2·1	49
1906	5·0	2·1	55	3·2	2·4	40
1907	5·8	2·0	55	3·0	2·5	53
1908	4·6	1·7	62	3·3	2·4	48

The crest of the wave appeared to have been reached in 1905, but in the Urban Districts there was a further rise in 1907. The figures in the Table seem to indicate that Scarlet Fever fluctuations in prevalency and severity continue notwithstanding the large number of cases removed for isolation.

During the past year the disease was particularly prevalent in the following districts:—

SCARLET FEVER.

TABLE XIX.

DISTRICTS.	No. of cases notified.	No. of deaths.	No. of cases removed to hospital.	Cases per 1,000 population.	Deaths per 1,000 population.	Deaths per 100 cases.	Percentage of cases removed to hospital.
Urban Districts.							
Barking ...	145	0	114	4·8	0	0	78·6
Braintree ...	20	0	19	3·7	0	0	95·0
Brentwood ...	50	0	31	6·4	0	0	62
Brightlingsea ...	16	0	0	1·2	0	0	0
Buckhurst Hill ...	1	0	0	·2	0	0	0
Burnham ...	...	...	...	...	...	...	...
Chelmsford ...	16	0	15	·9	0	0	93·7
Chingford ...	28	0	12	4·1	0	0	42·8
Clacton ...	39	0	30	4·8	0	0	76·9
Colchester ...	128	1	96	3	·02	·7	75
East Ham ...	1000	24	577	6·9	·16	2·4	57·7
Epping ...	52	1	44	1·3	·2	1·9	84·6
Frinton-on-Sea ...	1	0	0	·6	0	0	0
Grays ...	34	0	0	2·1	0	0	0
Halstead ...	12	0	5	1·9	0	0	41·6
Harwich ...	13	0	11	1·2	0	0	84·6
Ilford ...	446	3	296	5·8	·04	·6	66·3
Leigh-on-Sea ...	5	0	0	·8	0	0	0
Leyton ...	578	15	284	4·7	·12	2·6	49
Loughton ...	9	0	6	1·7	0	0	66·6
Maldon ..	16	1	11	2·8	·17	6·2	68·7
Romford ...	115	4	80	6·9	·24	3·3	69·5
Saffron Walden ...	1	0	1	·15	0	0	100
Shoeburyness ...	3	0	2	·6	0	0	66·6
Southend-on-Sea ...	170	0	138	2·9	0	0	81·2
Waltham Holy Cross ...	21	0	14	3·1	0	0	66·6
Walthamstow ...	635	11	410	4·8	·08	1·7	64·5
Walton-on-the-Naze ...	21	0	14	9·6	0	0	66·6
Wanstead ...	37	0	32	2·9	0	0	86·4
Witham ...	0	0	0	0	0	0	0
Wivenhoe ...	0	0	0	0	0	0	0
Woodford ...	54	0	27	2·7	0	0	50
Total ...	3656	60	2279	4·6	·08	1·7	62
Rural Districts.							
Belchamp ...	13	2	0	2·6	·4	14·6	0
Billericay ...	51	1	46	3·3	·06	1·9	90·1
Braintree ...	34	0	19	1·8	0	0	55·9
Bumpstead ...	3	0	0	1·3	0	0	0
Chelmsford ...	44	1	12	2·1	·04	2·2	27·2
Dunmow ...	28	0	15	1·8	0	0	53·5
Epping ...	75	0	61	5·3	0	0	81·3
Halstead, No. 1 ...	4	0	1	·8	0	0	25
Halstead, No. 2 ...	7	0	5	1·2	0	0	71·4
Lexden and Winstree ...	39	1	0	1·9	·05	2·5	0
Maldon ...	25	0	15	1·7	0	0	60
Ongar ...	88	2	0	8·1	·18	2·2	0
Orsett ..	125	4	74	5·3	·17	3·3	61·1
Rochford ...	56	1	43	3·3	·06	1·7	76·7
Romford ...	166	7	126	7·1	·3	4·2	74·7
Saffron Walden ...	11	0	9	1·1	0	0	8·8
Stansted ...	10	0	4	1·4	0	0	40
Tendring ...	55	1	0	2·4	·04	1·8	0
Total ...	834	20	430	3·33	·08	2·4	48

BRENTWOOD. Scarlet Fever was prevalent throughout the whole year and cases occurred in all parts of the town. The Medical Officer of Health says · “I believe that want of sufficient accommodation at the Isolation Hospital was chiefly the cause of the continued presence of the disease in the district.”

EAST HAM. Exactly 1,000 cases occurred during the year. As at Brentwood they occurred throughout the whole year and in all parts of the Borough. The subject will be again referred to under the heading of “Isolation Hospitals.”

ROMFORD. The disease was more rampant than for years past. It never assumed the features of an epidemic but occurred mainly in the Town Ward and the Harold Wood Ward.

ROMFORD (R.) The disease was very prevalent in Hornchurch and Dagenham.

ONGAR (R.) Most of the cases occurred in the three parishes of Bovinger, Chipping Ongar, and Stanford Rivers.

ORSETT (R.) 121 cases occurred, 52 of which were in the Thurrocks.

The cases which occurred in each district, together with mortality rate, etc., are given in the subjoined Table.

DIPHTHERIA.

Fewer cases occurred than during 1907, but the mortality rate was a little higher, the virulency of the disease being marked in certain districts. Above half the cases were removed to hospitals. The disease was most prevalent in East Ham, Ilford, and Maldon amongst the Urban Districts, and in Billericay, Bumpstead, Orsett, and Romford Rural Districts.

In last year's report a Table was given shewing that the number of deaths per 100 cases had decreased from 20 in 1895 to 8·9 in 1903, and that since the latter date there had been a marked increase. Taking the County as a whole the deaths were 12 per cent. during the year under consideration which,

though higher than in 1907 (10·6) was a little lower than in 1905 (12·9). The use of antitoxin is probably the cause of the reduced mortality, but I am a little doubtful whether antitoxin is being so largely used now in private practice as it was a few years ago. If this remedy were used sufficiently early the mortality should not be half what is actually recorded.

In East Ham the disease was prevalent throughout the year, especially in the Central West Ward. 72 per cent. of the cases were removed to the hospital, and the mortality was 14·25 per cent.

In Ilford the prevalence was chiefly in Cranbrook Ward. Antitoxin was supplied by the Council and the type of the disease was not of a severe character. Arrangements were also made for free bacteriological diagnosis, the swabs being sent to the County Laboratory for examination and report.

“At one time there were serious complaints of the smells arising from the Wanstead Sewage Works, and several people were of the opinion there was a connection between the two. It is difficult to conceive how these smells could give rise to Diphtheria, though perhaps in some unknown way they may assist in the growth of the bacillus.”

In Romford Rural District 103 cases of Diphtheria occurred chiefly in the parishes of Hornchurch and Dagenham. A house-to-house inspection in Hornchurch shewed that drainage defects existed in 90 per cent of the houses examined, naturally, therefore, such defects were found in nearly every house in which cases of Diphtheria occurred.

In several districts all contacts are examined, and if their throats are found to harbour the diphtheria bacillus an attempt is made to secure isolation. This is a very difficult matter as it is not unusual to find an apparently perfectly healthy person upon whose tonsils the Diphtheria bacillus may be found for months, notwithstanding continuous treatment.

Table XX. gives the number of cases which have occurred in each district, the number of deaths, percentage of cases removed to hospital, etc.

DIPHTHERIA AND MEMBRANOUS CROUP.

TABLE XX.

DISTRICTS.			No. of cases notified.	No. of deaths.	No. of cases removed to hospital.	Cases per 1,000 population.	Deaths per 1,000 population.	Deaths per 100 cases.	Percentage of cases removed to hospital.
Urban Districts.									
Barking	...	...	49	11	39	1·6	·36	22·4	79·6
Braintree	...	...	5	1	3	·9	·2	20·0	60
Brentwood	...	...	4	0	2	·5	0	0	50
Brightlingsea	...	...	2	1	0	·4	·2	50	0
Buckhurst Hill	...	...	1	0	0	·2	0	0	0
Burnham	...	...	...	...	...	...	...	...	...
Chelmsford	...	...	10	1	8	·58	·05	10	80
Chingford	...	...	8	1	3	1·2	·14	1·5	37·5
Clacton	...	...	10	0	7	1·2	0	0	70
Colchester	...	...	41	5	26	·9	·12	12·1	63·4
East Ham	...	...	456	65	329	3·1	·45	14·2	72·1
Epping	...	...	0	0	0	·0	0	0	0
Frinton-on-Sea	...	...	0	0	0	·0	0	0	0
Grays	...	...	19	3	0	1·2	·2	15·7	0
Halstead	...	...	0	0	0	·0	0	0	0
Harwich	...	...	6	0	2	·53	0	0	33·3
Ilford	...	...	161	8	79	2·1	·11	6	42·8
Leigh-on-Sea	...	...	2	1	0	·32	16	50	0
Leyton...	...	...	219	18	90	1·8	·15	8·2	41·1
Loughton	...	...	2	1	0	·3	·16	50	0
Maldon	...	...	30	0	13	5·2	0	0	43·3
Romford	...	...	27	6	24	1·6	·36	22·2	88·8
Saffron Walden	...	...	1	0	1	·15	0	0	100
Shoeburyness	...	...	1	0	0	·2	0	0	0
Southend-on-Sea	...	...	79	9	65	1·3	·15	11·4	82·3
Waltham Holy Cross	...	...	6	0	5	·9	0	0	83·3
Walthamstow	...	...	223	20	172	1·6	·15	9	77·1
Walton-on-the-Naze	...	...	1	0	0	·4	0	0	0
Wanstead	...	...	11	0	8	·8	0	0	72·7
Witham	...	...	11	2	0	3·0	·55	18·1	0
Wivenhoe	...	...	6	0	0	2·0	0	0	0
Woodford	...	...	17	1	8	·86	·05	5·8	47
Total	...	...	1408	154	884	1·8	·2	10·9	63
Rural Districts.									
Belchamp	...	...	3	0	0	·6	0	0	0
Billericay	...	...	34	0	26	2·2	0	0	76·4
Braintree	...	...	5	0	0	·22	0	0	0
Bumpstead	...	...	5	0	0	2·1	0	0	0
Chelmsford	...	...	6	0	1	·29	0	0	16·6
Dunmow	...	...	20	2	11	1·3	·13	10	55
Epping	...	...	6	4	5	·43	·23	66·6	83·3
Halstead, No. 1	...	...	2	0	0	·4	0	0	0
Halstead, No. 2	...	...	0	0	0	0	0	0	0
Lexden and Winstree	...	...	25	8	0	1·2	·4	32	0
Maldon	...	...	13	3	2	·97	·2	23	15·3
Ongar	...	...	10	1	0	·92	·09	10	0
Orsett	...	...	76	10	65	3·2	·42	13·1	85·5
Rochford	...	...	11	0	6	·6	·0	0	54·5
Romford	...	...	102	14	72	4·3	·6	13·7	70·5
Saffron Walden	...	...	13	2	4	1·3	·2	15·4	30·7
Stansted	...	...	6	1	4	·87	·14	16·6	66·6
Tendring	...	...	22	6	0	·9	·2	27·2	0
Total	...	...	359	51	196	1·4	·2	14·2	55

TYPHOID FEVER.

During the year 198 cases of Typhoid Fever (and 2 of Continued Fever) were notified in the Urban Districts and 66 in the Rural Districts. The numbers in 1907 were 184 and 56 respectively. The disease was more severe in the towns as 18·1 per cent. of the patients died, whereas in the rural areas only 12·1 per cent. of the cases proved fatal.

The death-rate, ·04 per 1,000 population, is very low, less than one-third of what it used to be a few years ago.

The highest rates still prevail in the area bordering on the Thames, and very high rates were recorded for the year in the Shoeburyness and Rochford districts. The cause of this excessive prevalence in these districts should be the subject of special reports by the respective Medical Officers of Health. The highest case-rate (1·3) was recorded in Shoeburyness but the Medical Officer of Health in his report merely says: "Some of the cases of Enteric were traced to shellfish picked up on the foreshore, and notices were posted warning people not to eat such shellfish." It is very probable that the crude sewage discharged upon the foreshore is the cause of the continued prevalence and as shellfish are collected from this neighbourhood it may be necessary for Shoebury to follow the example of Southend and arrange to purify its sewage before discharging it upon the foreshore.

In the Rochford Rural District the case-rate was 1·03 per 1,000. Unfortunately the illness of the Medical Officer of Health has prevented a full report being presented. Harwich had the next highest case-rate, ·8 per 1,000 population, but most of the cases occurred in one house, four persons who helped to nurse the first patient afterwards suffering from the disease. Cases of this kind emphasise the importance of the skilled nursing of patients suffering from Typhoid Fever.

In Barking the case-rate was ·7 per 1,000 population, which though high was lower than in 1907. There was no

TYPHOID, CONTINUED, AND PUERPERAL FEVERS.

TABLE XXI.

DISTRICTS.	Typhoid and Continued Fevers.							Puerperal Fever.	
	No. of cases notified.	No. of deaths.	No. of cases removed to hospital.	Cases per 1,000 population.	Deaths per 1,000 population.	Deaths per 100 cases.	Percentage of cases removed to hospital.	No. of cases notified.	No. of deaths.
Urban.									
Barking ...	22	3	14	·7	·1	13·6	63·7	1	0
Braintree ...	0	1	0	·2	·2	...	...	0	0
Brentwood ...	0	0	0	0	0	0	0	0	0
Brightlingsea ...	0	0	0	0	0	0	0	0	0
Buckhurst Hill ...	0	0	0	0	0	0	0	0	0
Burnham ...	...	...	...	...	...	...	...	...	...
Chelmsford ...	7	1	5	·4	·05	14·2	71·4	1	0
Chingford ...	0	0	0	0	0	0	0	0	0
Clacton ...	0	0	0	0	0	0	0	0	0
Colchester ...	11	2	7	·26	·04	18·1	63·6	1	0
East Ham ...	18	3	8	·12	·02	16·6	44·4	5	5
Epping ...	0	0	0	0	0	0	0	0	0
Frinton-on-Sea ...	0	0	0	0	0	0	0	0	0
Grays ...	2	0	0	·12	0	0	0	1	0
Halstead ...	1	0	1	·16	0	0	100	2	1
Harwich ...	9	2	7	·8	·17	22·2	77·7	0	0
Ilford ...	12	0	8	·15	0	0	66·6	2	1
Leigh-on-Sea ...	0	0	0	0	0	0	0	0	0
Leyton ...	25	4	17	·2	·03	16	68	7	6
Loughton ...	1	0	0	·16	0	0	0	0	0
Maldon ...	9	3	4	1·5	·5	37·5	50	1	0
Romford ...	6	0	1	·36	0	0	16·6	0	0
Saffron Walden ...	1	0	0	·15	0	0	0	0	0
Shoeburyness ...	6	0	4	1·3	0	0	66·6	0	0
Southend-on-Sea ...	26	3	20	·45	·05	11·5	77·9	2	2
Waltham Holy Cross ...	0	0	0	0	0	0	0	0	0
Walthamstow ...	37	13	22	·28	·09	35·1	59·4	8	5
Walton-on-the Naze ...	1	0	0	·4	0	0	0	0	0
Wanstead ...	1	1	0	·07	·07	100	0	0	0
Witham ...	0	0	0	0	0	0	0	0	0
Wivenhoe ...	0	0	0	0	0	0	0	0	0
Woodford ...	3	0	1	·15	0	0	33·3	0	0
Total ...	198	36	119	·25	·045	18·2	60	31	20
Rural.									
Belchamp ...	0	0	0	0	0	0	0	0	0
Billericay ...	13	0	4	·8	0	0	30·3	1	2
Braintree ...	8	2	7	·44	·11	25	87·5	0	0
Bumpstead ...	0	0	0	0	0	0	0	1	1
Chelmsford ...	1	0	0	·04	0	0	0	0	0
Dunmow ...	2	1	0	·13	·06	50	0	0	0
Epping ...	0	0	0	0	0	0	0	0	0
Halstead, 1 ...	2	0	2	·4	0	0	100	0	0
Halstead, 2 ...	0	0	0	·0	0	0	0	0	0
Lexden & Winstree	6	1	0	·3	·05	16·6	0	1	1
Maldon ...	3	0	2	·2	0	0	66·6	0	0
Ongar ...	0	0	0	0	0	0	0	1	0
Orsett ...	4	0	4	·17	0	0	100	2	2
Rochford ...	17	2	10	1·03	·12	11·7	58·5	0	0
Romford ...	7	2	0	·3	·08	28·5	0	2	1
Saffron Walden ...	1	0	0	·1	0	0	0	0	0
Stansted ...	0	0	0	0	0	0	0	0	0
Tendring ...	2	0	0	·09	0	0	0	0	0
Total ...	66	8	29	·26	·032	12·1	44	8	7

distinct outbreak, such as would occur if a public water supply, or a milk supply had become infected. In fact the absence of outbreaks due to such causes in the county is noteworthy.

At Southend a very careful study is made of each notified case and the results recorded are always interesting. Of the 26 cases which occurred 6 were imported and the source of infection was traced. Of the 20 local cases there was a history of eating shellfish within three weeks of the onset in 13. A series of cases of diarrhoea and vomiting occurred in October, attributed to the eating of oysters picked up from oyster beds the use of which had been abandoned on account of their liability to pollution. The steps taken by the Corporation during recent years to reduce the prevalence of Typhoid Fever have been remarkably successful, and when the foreshore is further protected by the purification of the sewage and its discharge into deep water, there is little doubt that cases of Typhoid, other than those introduced from without, will become very rare indeed. The increased healthiness of the Borough will gain for it a reputation which, it is to be hoped, will more than recompense it for the great expense which is being incurred.

PUERPERAL FEVER.

It was thought that the Midwives Act would, if properly enforced, cause a reduction in the number of cases of Puerperal Fever. There are no indications of its having any such effect in this County, as the following Table shews :—

THE SIX YEARS PRIOR TO THE ACT COMING IN OPERATION.

			Cases notified.
1897	...	...	48
1898	...	...	30
1899	...	...	52
1900	...	...	54
1901	...	...	40
1902	...	...	44
Total			268

THE SIX YEARS SINCE THE ACT CAME INTO OPERATION.

		Cases notified.
1903	...	42
1904	...	51
1905	...	45
1906	...	56
1907	...	41
1908	...	39
Total		274

As a matter of fact very few cases notified occur in the practice of Midwives. No complaint is made against Midwives in any report, but the Medical Officer of Health for Walthamstow says: "It is hardly credible that so few lying-in women contract fever, considering the conditions under which many are placed, and the lack of all antiseptic precautions displayed by unqualified nurses." One would naturally think that some benefit would accrue from the supervision of the untrained Midwives, but it certainly is not shewn in the Puerperal Fever returns.

MEASLES AND WHOOPING COUGH.

Judging from the mortality returns, *vide* Table XIV., Measles has been less prevalent than in 1907 and Whooping Cough far less prevalent. This Table also shews that the deaths due to these diseases were only about half the average for the years 1890-1907.

An effort is being made by the County Education Committee to secure the earliest possible notification of cases occurring amongst children attending school, but the effort has not yet been markedly successful, the teachers either neglecting to notify or not becoming aware of the presence of the infection until a large number of children have been attacked. To quote the Medical Officer of Health for East Ham, in referring to Measles and Whooping Cough, "Administrative measures

have hitherto failed to reduce their prevalence. Following on a few years of reduced frequency, then comes a year with a large epidemic wave, which attacks a majority of all young children not rendered immune by a previous attack. Both diseases are highly infectious at a very early stage, and owing to the widespread opinion that these diseases are more or less inevitable, very little attempt is made to isolate those suffering from an attack or to shield other children from infection. . . . By care infection can be prevented until a child is 6 or 7 years of age (when) not only is it then less likely to be attacked, but if attacked, the chance of recovery is infinitely greater. This is one of the arguments for excluding from school all children under 5 years of age."

At Colchester probably 800 cases of Measles occurred during the year. No less than 640 were notified during the last 4 months. "All these were visited by the Sanitary Inspector or other members of the staff of the department, entailing a very extended amount of work. All infected houses were subsequently disinfected." The Medical Officer of Health does not say whether he thinks that the results justified this expenditure of time and money. Some Medical Officers refer to attempts made to close the schools for short periods where a crop of fresh cases are expected, but apparently this method is not so satisfactory here as it is reported to have been in the country in which it had its origin.

ISOLATION HOSPITALS.

In the reports for 1907 a list was given of the districts in which inadequate provision had been made for isolating patients suffering from infectious diseases and I gave therein my reasons for not strongly urging the County Council at present to further enforce the provisions of the Isolation Hospital Acts. My report on the expenditure at the various hospitals emphasises the necessity for a comprehensive enquiry into the Administration and Utility of Isolation Hospitals. At present it appears to be possible to spend an enormous amount

of money without any very appreciable benefit, and it is quite possible that public money could be far more usefully expended than in providing and maintaining such hospitals, especially in small towns and rural districts.

The percentage of cases removed to hospitals in the Urban and Rural Districts are given below. The numbers actually removed in each district will be found in Table C. (Appendix).

	Percentage of Notified Cases removed to Hospital.			
	Rural Districts.		Urban Districts.	
Scarlet Fever	...	48	...	62
Diphtheria	...	55	...	63
Typhoid Fever	...	44	...	60

The County Council makes an annual grant not exceeding £5 per bed (2000 c.f. air space) to such Hospitals as were erected by means of loans sanctioned by the Local Government Board. For the purpose of apportioning the grant the County Medical Officer was directed to give his attention (*inter alia*) to the following points when reporting on the several Hospitals as efficient or otherwise :—

- (1) The adequacy of the precautions taken to prevent infection being conveyed by inmates to persons outside, with special reference to the nature of the enclosure.
- (2) The position and area of the hospital site and the adequacy of the Hospital for the whole of the district served.
- (3) The general character and arrangement of the several buildings, the condition of repair, adequacy of lighting, heating, ventilation, drainage, and water supply.
- (4) The amount of accommodation provided, the air space per bed, and the number of diseases which can be treated at the same time with proper separation of the sexes.

- (5) The arrangement and furnishing of the wards and administrative block and the convenience for nursing.
- (6) The efficiency of the staff and of the administration generally.
- (7) The adequacy of the arrangement for moving patients, for admitting and discharging patients, and for disinfection.

The Grants made for 1908 are as follows :—

Hospital.	No. of Beds for which a grant can be made.			At £ per head.			£	s.	d.
	£	s.	...			
Walthamstow	...	34	..	5	0	...	420	0	0
Ilford	56	...	5	0	...	280	0	0
Romford	...	42	..	5	0	...	210	0	0
East Ham	...	30	...	5	0	...	150	0	0
Waltham	...	42	...	5	0	...	210	0	0
Southend	...	21	...	4	15	...	99	15	0
Chelmsford	...	21	...	5	0	...	105	0	0
Rochford	...	12	...	4	10	...	52	0	0
Orsett	20	...	4	15	...	95	0	0
Maldon	10	...	5	0	...	50	0	0
Braintree	...	8	...	5	0	...	40	0	0
Dunmow	..	8	...	5	0	...	40	0	0
Halstead	...	6	...	4	10	...	27	0	0
Saffron Walden	...	6	...	4	15	...	28	10	0
Clacton	17	...	5	0	...	85	0	0
							£1,892	5	0

I have prepared from the statements of accounts submitted the three following Tables. No. 1 shews the number of beds and the staff at each Hospital. No. 2. shews the number of patients treated and the structural, establishment, and patients' expenses. No. 3 is devised to shew the relative cost of maintaining patients and staff.

The variations are so enormous that these Tables ought to be in the hands of the managers of all the Hospitals, as a study of them could not fail to be in the interests of the ratepayers. Compare for example the Waltham Hospital with that of the Chelmsford. The former is twice the size of the latter, yet the latter maintains a larger staff; either one is overstaffed or the other is understaffed. Or compare the Rochford and Chelmsford Hospitals, which are approximately the same in size, yet one has more than three times the staff of the other. Or compare Clacton with 17 beds and a staff of 5 and Maldon with 10 beds and a staff of 8.

Table No. 2 enables the expenses to be compared. For example, in the Chelmsford Hospital 51 patients were treated and the total expenditure for the year was £2,310, whereas in the Maldon Hospital 54 patients were treated and the cost was £1,398, and in the Clacton Hospital 45 patients were treated, and the total expense was only £652.

Table No. 3 is an attempt to get at really comparable figures and I have worked out the cost per person maintained per annum. I have assumed that each Scarlet Fever patient was in the Hospital for six weeks, and the other patients three weeks. This I find out works very nearly correct, when compared with the actual figures given in the East Ham Medical Officer of Health's report. In calculating the expense I have not included the re-payment of loans, so that the cost given may be said to be exclusive of rent. Here again the results are startling. At East Ham each person costs £47 per annum and at Clacton £49, whereas at Chelmsford each person costs £102. In all respects the Chelmsford Hospital is the most expensively maintained.

The cause of these variations should be carefully studied by the Committees of Management.

TABLE No. 1.
HOSPITAL GRANTS.—NUMBER OF BEDS AND NUMBER OF STAFF AT EACH ISOLATION HOSPITAL
QUALIFIED FOR A GRANT.

Name of Hospital.	No. of Beds.	Matrons, Nurses, and Probationers.	Wardmaids and Servants.	Porters and men living on the premises.	Men living outside.	Women living outside.	Total staff, exclusive of Medical Officer and Clerk.
Walthamstow	84	18	16	1	4	...	39
East Ham	95	23	12	1	5	5	46
Ilford	56	15	11	2	2	...	30
Romford Joint	42	9	11	1	...	...	21
Waltham Joint	42	5	5	2	...	...	12
Southend	44	8	7	0	3	2	20
Orsett	26	6	4	1	...	...	11
Chelmsford Joint	21	6	5	1	1	...	13
Rochford	20	2	1	1	...	...	4
Clacton	17	2	2	...	1	...	5
Braintree Joint	11	2	1	...	1	...	4
Maldon Joint	10	3	4	1	...	...	8
Saffron Walden Joint	10	1	1	1	...	...	3
Dunmow	8	1	1	1	...	...	3
Halstead	6	1	1	...	...	...	2

TABLE No. 2.

HOSPITAL GRANTS.—TOTAL EXPENDITURE OF EACH HOSPITAL. NUMBER OF BEDS AND
NUMBER OF PATIENTS TREATED.

Name of Hospital.	No. of Beds.	No. of Patients treated.	Structural Expenses.	Establishment Expenses.	Patients Expenses.	Total Expenses.
			£	£	£	£
Walthamstow	84	594	2947	5000	419	8366
East Ham	95	903	980	5053	590	6623
Ilford	56	389	1320	3869		5187
Romford Joint	42	392	975	2487	271	3733
Waltham Joint	42	72	1022	1209	40	2271
Southend	44	162	889	1979	244	3112
Orsett	26	185	636	1183	54	1873
Chelmsford Joint	21	51	570	1579	161	2310
Rochford	20	45	261	581	88	930
Clacton	17	45	243	398	11	652
Braintree Joint	11	41	286	652	56	994
Maldon Joint	10	54	388	945	65	1398
Saffron Walden Joint	10	15	85	286	14	385
Dunmow	8	23	421	420	20	861
Halstead	6	9	213	237	3	453

TABLE No. 3.

HOSPITAL GRANTS.—COST FOR EACH PERSON MAINTAINED IN EACH HOSPITAL FOR ONE YEAR.

Name of Hospital.	No. of Resident Staff.	Average No. of Patients in Hospital.	Total No. of persons maintained.	Establishment and Patients' Expenses.	Cost per person maintained.	Cost per person treated.
Walthamstow	34	58	92	£ 5419	£ 59	£ s. d. 9 2 0
East Ham	35	85	120	5643	47	6 5 0
Ilford	26	40	66	3869	59	9 19 0
Romford Joint	21	40	61	2758	45	7 1 0
Waltham Joint	10	7	17	1249	73	17 7 0
Southend	15	16	31	2223	72	13 1 0
Orsett	11	16.4	27.4	1237	45	6 14 0
Chelmsford Joint	12	5	17	1740	102	34 0 0
Rochford	4	4½	8½	689	83	15 6 0
Clacton	4	4.3	8.3	409	49	9 9 0
Braintree Joint	5	4	9	708	79	17 5 0
Maldon Joint	7	5.3	12.3	1160	81	20 7 0
Saffron Walden Joint	3	1.5	4.5	300	67	20 0 0
Dunmow	5	2	7	441	63	19 4 0
Halstead	2	1	3	240	80	26 3 0

TABLE XXII.

METEOROLOGICAL DATA AND PREVALENCE OF INFECTIOUS DISEASES

For the Year ending December 31st, 1908.

Month.	METEOROLOGICAL DATA.					INFECTIOUS DISEASES NOTIFIED.					TOTAL.
	Mean Tempera- ture.	Mean Daily Range.	Relative Humidity	No. of Rainy Days.	Rainfall.	Small- pox.	Diphth- eria and Group.	Fevers.	Scarlet Fever.	Erysipe- las.	
January...	35·2	12·5	84	10	·81	0	186	22	402	84	794
February	41·1	12·6	87	15	1·32	0	163	8	433	63	667
March ...	40·1	14·5	86	21	2·22	1	138	24	441	55	559
April ...	43·1	15·9	77	19	2·58	0	126	10	370	57	563
May ...	55·4	18·6	76	14	2·15	0	150	17	366	53	586
June ...	58·8	22·0	74	4	·91	0	139	16	274	45	474
July ...	60·8	19·2	79	12	3·12	0	134	22	341	45	542
August ...	58·4	19·3	74	16	2·93	0	128	28	328	36	520
September	55·7	17·9	81	14	1·2	0	141	36	434	57	668
October ...	53·2	17·8	93	10	1·18	0	188	46	381	56	671
November	44·9	14·4	88	7	·99	0	138	49	372	93	652
December	38·2	9·6	89	18	2·20	0	146	28	324	72	570
Means & Totals	48·7	16·3	82	160	21·61	1	1777	306	4466	726	7266

RAINFALL FOR YEAR

IN DIFFERENT

DISTRICTS.

Barking ...	... 22·66
Belchamp	... 19·32
Buckhurst Hill	... 24·43
Chelmsford	... 21·61
Clacton ...	... 17·62
Colchester (Lexden)	17·40
East Ham	... 20·01
Frinton ...	... 18·42
Ilford	... 20·52
Leyton ...	... 20·53
Saffron Walden	... 21·02
Southend	... 18·69
Average	... 20·18

SECTION III

SANITARY ADMINISTRATION.

The epitomised reports in the appendix afford an indication of the character of the sanitary administration in each district so far as it can be judged from the records of the Medical Officers of Health. It is quite possible, however, that some of the very meagre reports presented do not do justice to the Authorities, but, if so, that is not entirely the fault of the reporting official, as the Authority should see that the results of its labours are duly chronicled. A brief summary of the more important matters bearing upon the public health, shewing the present condition and recent changes, will be of interest to many who may not care to study the separate reports.

WATER SUPPLIES.

Although water is nowhere very abundant, the County is probably better supplied than many others more advantageously situated. There are no mountains and moorlands from which water can be collected, and save in the metropolitan area water derived from wells and springs has to be depended upon for public and private supplies.

Every town has a public supply and many of the larger villages, but a few large parishes such as Tollesbury, Bocking, West Mersea, Thaxted, require public supplies, the present sources being inadequate or otherwise unsatisfactory. A good deal of attention has been devoted of recent years to improving the supplies in the Rural Districts, but much yet remains to be done. It is satisfactory, however, to note that the Typhoid Fever prevalence in the Rural Districts which is usually, and probably erroneously, attributed to the use of polluted water, is much lower than in the Urban Districts with their more abundant and pure supplies.

METROPOLITAN WATER BOARD'S AREA.

This comprises nearly half the inhabitants of the County. The supply has been most satisfactory both in quality and quantity.

SOUTH ESSEX WATER CO.'S AREA.

GRAYS. Little or no pumping has taken place from the wells in the chalk quarries, as preparations are being made for softening the supply. There was a considerable diminution in the amount of saline matter in the water.

BARKING. Samples submitted to analysis were found to be quite satisfactory. Many domestic supplies have been altered during the year, so that water could be obtained direct from the mains, and the Council is urged not to allow new houses to be occupied without this provision.

ILFORD. An agreement has been entered into with the Water Co. to extend their mains beyond Aldborough Hatch School, and the houses are being connected thereto, the private wells having been found to be polluted.

ORSETT (R.) The mains have been extended to Orsett Heath. At Linford the Company has sunk a second large well into the chalk and the water pumped therefrom will be sent to the Aveley reservoir.

THE SOUTHEND WATER CO.'S AREA.

ORSETT (R.) Negotiations have been resumed with the Water Co. for the supply of water to Laindon Hills, where water is much needed.

BILLERICAY (R.) The Southend Water Co. are getting on rapidly with the work of laying mains in the district. They have now a network of mains extending through Vange, Pitsea, Bowers Gifford, North Benfleet, Nevendon, Wickford, Basildon, Laindon, Great Burstead, Ramsden Crays and Bellhouse, and Downham. They are supplied from the Thundersley reservoir. A deep well near Downham is nearing completion, as is also the reservoir at Billericay.

LEIGH-ON-SEA. A number of branch mains have been laid. The supply has been excellent.

SOUTHEND. The supply has been constant and satisfactory. The Company possess no less than 18 deep wells, which with two exceptions are in the open country and are admirably constructed and efficiently protected against the possibility of pollution.

THE TENDRING HUNDRED WATER CO.'S AREA.

FRINTON. The water supply has been all that could be desired.

WALTON. The supply was good and plentiful, and throughout the year there was no complaint.

TENDRING (R.) The Company have opened their new works at Lawford and supply 11 parishes in the district. The supply is good and the charges reasonable.

THE ESSEX AND HERTS WATER CO.'S AREA.

EPPING (U.) The supply is abundant and of good quality but the Medical Officer of Health says it would be a great boon if the water were softened before distribution.

EPPING (R.) The mains have been extended during the year through Netteswell, Rye Hill, and Broadley Common to Roydon.

DUNMOW (R.) Mains are being laid to supply Hatfield Broad Oak and Hatfield Heath.

LOCAL WATER SUPPLIES.

BRAINTREE. The work of deepening No. 1 well and installing a suction gas plant is now well advanced and is expected to be completed before the summer.

BRIGHTLINGSEA. There are many wells supplying outside houses. The public supply has been well maintained, but the water has not been analysed during the year.

BURNHAM. No report received. Water supply limited.

CHIELMSFORD. The Medical Officer of Health says the available supply is inadequate and should be increased. An enormous waste of water has been prevented by the attention given recently to the house fittings. In the South Ward 25 per cent. of the houses have not a constant service. The Waterhouse Estate is now supplied with water from the town mains.

CLACTON, COLCHESTER, MALDON, SAFFRON WALDEN (where the water is softened). Supplies reported satisfactory.

SHOEBURYNESSE. The deep well is failing and the quantity now yielded is not sufficient for the supply of the town. The matter is receiving the attention of the Council.

WIVENHOE. Many houses are not yet connected with the mains. The Council have had the question of extending the mains under consideration for some time but have not as yet carried out the work. Wells supplying a block of 24 houses have been condemned.

BRAINTREE (R.) The trial bore made for the supply of Bocking is not likely to yield sufficient water. The bore made to supply Coggeshall yields 6,000 to 8,000 gallons per hour and the scheme is to be extended to include Little Coggeshall and Kelvedon.

CHELMSFORD (R.) The public supplies in this district have been well maintained. A supply for Broomfield is under consideration. No feasible means of supplying Stock and West Hanningfield have been discovered.

DUNMOW. The Mid-Essex District Water Co. has provided supplies for Dunmow and Felstead. Both supplies are of good quality. As yet few houses have been connected. Thaxted would be greatly benefitted by a public supply.

HALSTEAD. The public wells are maintained in good condition. The lower parts of Earls Colne and White Colne are in need of a better supply. A well has been sunk at Hop-

well's Corner, Great Maplestead, and a good supply of wholesome water was obtained.

LEXDEN AND WINSTREE. The parishes of Salcot and Wigborough are very badly supplied with water. Dr. Cook has suggested the extension of certain mains from the Maldon Rural District, but the subject does not appear to have been seriously considered.

MALDON (R.) Tiptree works. A main has been carried a distance of $1\frac{1}{2}$ miles to supply an estate, at the cost of the owner.

A trial boring is being made at Mundon to provide a supply of water for the parish from the deep chalk or Thanet sands. The boring at Heybridge Basin has been deepened to increase the quantity supplied. Unfortunately the water reached is very saline. The Local Government Board sanctioned the making of a trial bore at Tollesbury, but it has not been proceeded with. It may be found possible to find a safer source and to supply several other parishes.

TENDRING. Several villages require water supplies. St. Osyth and Great Bentley are mentioned. For the latter village the Rural District Council received the sanction of the Local Government Board to a scheme which has only been partially carried out.

In nearly all the rural reports reference is made to improvements in private supplies, and to the difficulty of obtaining water, but the feasibility of providing supplies for groups of parishes does not seem to meet with the consideration it deserves.

SEWERAGE AND SEWAGE DISPOSAL.

POLLUTION OF STREAMS.

Continued attention is being given to works of sewerage and sewage disposal, and there is no doubt that the water in streams and estuaries is improving in character. There are many large villages which would be improved by sewerage, but

the cost is usually so great for any satisfactory scheme that it is regarded as prohibitive. The possibility of obtaining the sanction of the Local Government Board to any scheme, unless it is very comprehensive and costly, seems to be regarded as out of the question. This is probably a mistake, as the Board could not refuse consideration to any simple, well thought out scheme, which would greatly improve the existing conditions, providing they were satisfied that a more ambitious scheme would be an unreasonable burden upon the parish. Unfortunately engineers do not care to devise such schemes, the remuneration, based on the expenditure, being inadequate. I have had schemes submitted to me for the sewerage of villages which one could see at a glance were perfectly utopian. In consequence Rural District Councils get disgusted and disheartened and more and more disinclined to undertake anything of a comprehensive character. Schemes for villages must always be relatively much more expensive than for towns, and if an attempt is made to deal with the chief aggregation of houses, those who inhabit houses beyond the limits of the proposed sewers somewhat naturally object to having to bear a portion of the expense.

BARKING. Creeksmouth is not yet sewered ; it is a matter which should be dealt with at the very earliest opportunity. A special "exhauster" for emptying cesspools has been provided, and the cost of emptying has become more reasonable.

BRAINTREE. The sanction of the Local Government Board has been obtained to a loan of £7,000 for works of sewerage and sewage disposal. Double bacterial filtration is to be adopted on land further removed from the town.

BRENTWOOD. A comprehensive scheme of sewage disposal and of improvements in the existing system of sewerage has been submitted to the Local Government Board, but their approval has not yet been received. The system serves a portion of the Billericay Rural District also and is under the control of a Joint Committee. This dual control is not regarded

as satisfactory by the Medical Officer of Health. The present works pollute the Ingrebourne.

EAST HAM. The chemical treatment of the sewage is said to yield a good effluent, but the Council, "in fulfilment of a pledge given to the Local Government Board, is at the present time laying down a series of 'clinker' filters for the further treatment of the tank effluent."

GRAYS AND PART OF ORSETT RURAL DISTRICT. The question of enlarging the tanks at Grays in order to provide for the increasing population remains in abeyance, as it may be found desirable to take in the sewage of West Thurrock, which is in a very insanitary condition for want of sewers.

HARWICH. The ventilation of the sewers here requires attention. Many houses in the higher portion of the Borough are subject to rushes of sewer gases from the mains. The low lying portions are liable to flood after heavy rains, and extra pumping power is to be provided.

HALSTEAD. Improvements are required both in the system of sewerage and sewage disposal to prevent the pollution of the river. These appear to be receiving consideration. More efficient ventilation of the sewers is also desirable.

ILFORD. One of the septic tanks exploded during the year and caused considerable damage. Complaints arise at the boundary of the district of effluvium from the Wanstead sewage works (*vide* Wanstead).

LEIGH-ON-SEA. The works here have been considerably improved and steps have been taken to keep tidal water out of the sewers, as this prejudicially affects the action of the bacteria beds.

LEYTON AND WALTHAMSTOW. A scheme is under consideration for draining these towns, together with Edmonton and Enfield, into the London County Council sewers, when the existing works would be abandoned.

LOUGHTON. A second and larger sprinkler bed has been completed and "the system is working admirably." The ventilating shafts erected from time to time have ensured the perfect ventilation of the sewers.

SAFFRON WALDEN. A firm of engineers has submitted a report "as to the most suitable sewerage scheme to adopt in the Borough." The report is under consideration.

SOUTHEND. As suggested by the Local Government Board, a Bill was promoted in Parliament for power to acquire land for sewage disposal works and to extend sewers, etc. The total cost is estimated at £160,000. The sewage will be treated on bacterial lines and the effluent discharged into the estuary below the low water line. When these works are completed the foreshore at Southend will be above reproach.

WANSTEAD. The bacteria beds have been duplicated and it is hoped that no further complaints will arise from the adjoining district. The present system of sewer ventilation does not appear to be satisfactory.

WIVENHOE. This town remains unsewered. Complaints arise from the emptying of the dead wells.

WOODFORD. Improvements have been effected at both the eastern and western sewage works and the Medical Officer of Health says "The river water in the Roding below the eastern works is quite clear and very different from what it was a few years ago, and the condition of the Ching below the western sewage works is all that can desired."

In the rural districts there are few references to sewage works, and many of the sewers mentioned are but road drains which have been converted into sewers, a purpose for which they were never intended. These invariably discharge into ditches or streams and sometimes cause serious pollution. In a few districts proper sewers have been laid and the sewage is allowed to deposit in a tank before passing into the ditch or stream, and in some cases a little alumino-ferric is added to aid the precipitation of the impurities. Such tanks require

constant attention, much more than they usually receive. In a few cases the effluent is passed through a coke bed to ensure further precipitation.

BELCHAMP. The Brewery sewage, at Foxearth, is now treated chemically, and "has almost entirely remedied the nuisance in the sewage ditch, into which the effluent is discharged."

BILLERICAY. "There are four large sewers and many smaller ones emptying themselves without any attempt at purification. These four larger drains all pollute watercourses. One of the sources of the Crouch is very heavily polluted for a long distance." These drains are used by the town of Billericay and the Medical Officer of Health has called attention to the necessity for sewerage for several years.

BRAINTREE. A scheme has been devised for the sewerage of Kelvedon. At Hatfield Peverel a serious nuisance arises from the admixture of brewery and domestic sewage in an open ditch.

BUMPSTEAD. The river Stour is polluted by the sewage effluent from Haverhill, and some sewage runs in from the village of Sturmer. A portion of the river bed has recently been cleaned out.

CHELMSFORD. In this district there are several sewage works which are well maintained. The parishes most in need of sewers and some system of disposal works are Broomfield and Little Waltham. Plans have been prepared for the former.

HALSTEAD. There are several parishes in this district the sewerage of which required improvement. Some slight improvements are chronicled at Sible and Castle Hedingham.

DUNMOW. Several large villages (or small towns) discharge untreated sewage into the Chelmer or its tributaries. Dunmow, Felstead, and Thaxted may be especially mentioned. The Medical Officer of Health thinks that a beginning should be

made at Thaxted, as the problem will have to be grappled with sooner or later.

EPPING. The scheme for sewerage Roydon had not received the sanction of the Local Government Board. The estimated cost is £4,830. The scheme for improving the drainage of Chigwell has been completed. Potter Street near Harlow, North Weald Gullet, and Thornwood, are hamlets which require attention.

LEXDEN AND WINSTREE. The system of sewage disposal at Dedham completed in 1907 gives satisfaction. West Mersea continues to increase in population but remains unsewered.

MALDON. A very simple sewerage scheme has been installed at Latchingdon. The sewage is collected in a tank and pumped by means of a wind engine upon adjoining land. The problem of dealing with Southminster remains unsolved. The parishioners strongly object to any new system of sewerage as the cost would undoubtedly be very heavy.

ROMFORD. The sewerage system carried out at Dagenham is not in working order. The delay in completion is causing much anxiety to the Council.

SAFFRON WALDEN. Great Chesterford and Newport would be greatly improved by sewerage, but the expense would be too great.

TENDRING. Improvements are required at Lawford Thorpe-le-Soken, Great Bentley, Weeley, and St. Osyth. Improvements in several parishes are chronicled.

HOUSING OF THE WORKING CLASSES.

There does not appear to be any Urban District in which the Medical Officer of Health thinks there is an urgent need of more cottages. In many of the larger towns there are many unoccupied houses, and some of the larger of these are being converted into tenement houses for two or more families. In several Rural Districts it is stated that a better supply of

cottages is wanted. For example the Medical Officer of Health for Billericay says :—

“In the last few years cottages have fallen down, and others have been closed by order of the Authority, and these cottages have not been replaced, hence the need for action on the part of the Authority. There is hardly a parish in this district that is not in want of additional cottage accommodation though in 1904 the Building Bye-laws were made much less stringent.”

The chief want in the Rural Districts is a supply of cottages with three bedrooms, and one large living room, to take the place of the old houses now rapidly sinking into decay. In the purely agricultural parishes few cottages are erected and those which are erected usually have only four small rooms, two upstairs and two down, one of the latter being intended for a “parlour.” Few of the old houses had parlours and were consequently more commodious than the modern type. Houses with two or three bedrooms, with a good sized living room and a small scullery with a copper are what are required in villages, but as the agricultural labourer cannot afford to pay rent for a modern cottage he must put up with such as are provided for him until, as a result of education, he demands to have better accommodation. The labourer himself is about the last to complain, and unfortunately when those who want to be his friend agitate for the supply of better cottages they receive little or no encouragement from those they wish to befriend. Until this apathy is shaken off very little improvement will take place in the housing of the agricultural labourer. In certain parishes in which reside families employing grooms, gardeners, chauffeurs, etc., these latter have ousted the older inhabitants and taken possession of all the best cottages. In many parishes there are large farms without any cottages attached. In certain of these cases the threat to put in force the Housing of the Working Classes Act has resulted in the landlords erecting cottages. The owners of large farms should provide cottages for the labourers, and tenants of large houses

should see that the owner provides cottages for those who must be employed to administer to his ease. The Town Planning Bill will facilitate the provision of cottages, if an authority wishes to provide them or a parish demands them, but—very little rural experience would demonstrate to the patient observer that it will not be utilized. The inhabitants of our rural parishes will either remain apathetic or they will refuse to see the wisdom of paying increased rates to provide cottages for large land owners and the owners and tenants of large houses who ought to provide them for their own workpeople.

The Rural Housing Problem is not yet solved nor will it be solved by the Town Planning Bill should it be passed in its present form.

In the report on the Maldon Rural District some interesting details are given as to the relative cost of cottages erected under the Housing of the Working Classes Act at Bradwell and of similar cottages erected by the Messrs. Wilkin at Tiptree. If Messrs. Wilkin can erect cottages, and prove them a better investment than Consols, cannot other employers of labour do the same? The real cause why the cottage accommodation is not satisfactory in Rural Districts is the lack of remunerative employment. It is no use ignoring the fact. Find the labourers work at wages which will enable them to pay a reasonable rent and the housing problem would solve itself, and until such employment is found rural housing will never be satisfactory. Still improvements may be effected by rate aid, and this aid would benefit all the poorer ratepayers. When cottages of a better class are provided it is not the poorest class of labourer who occupies them but the higher wage earners. These in turn leave houses into which their poorer neighbour can move and thus congestion is relieved and the very worst cottages go out of occupation.

THE MILK SUPPLY.

There is no record of any outbreak of disease due to infected milk. The action of the London County Council under their General Powers Act of 1907 has had a marked stimulating

effect upon both farmers and Local Authorities. Part IV. of the Act relates to Milk Supply (Tuberculosis) and empowers the London County Council to take samples of milk in London, either at the railway station or in shops or elsewhere if intended for sale, and if the milk, upon examination, is found to be tuberculous the medical officer and qualified veterinary surgeon may visit any dairy or cowshed from which the milk was sent and examine the cows, and take samples of milk therefrom. If any cow is found to be suffering from tuberculosis and to be furnishing tuberculous milk, the medical officer must report to the London County Council, and the Council may cause notice to be served upon the dairyman to appear before them and shew cause why an order should not be made excluding his milk from London. The order, if made, may be withdrawn when the County Council is satisfied that the milk supply is no longer dangerous. A penalty of £5 may be inflicted if the order is not obeyed and a daily penalty of £2 if the offence continues. Dairy men outside London may appeal either to a Metropolitan Police Court or to the Board of Agriculture and Fisheries.

Every person knowingly selling milk from a cow suffering from tuberculosis of the udder is liable to a penalty of £10.

Any person sending milk to London who keeps a cow suffering from tuberculosis with other cows in milk is liable to penalty of £5.

Any person having a cow suspected to be suffering from tuberculosis of the udder must notify the fact to the medical officer, on pain of a penalty of £2.

The result of the inspection made in this county has been the discovery of several cows suffering from tubercular disease. These have been, in many cases, sent to neighbouring markets and sold. At Chelmsford Market special attention is now given to such animals, and at Romford some supervision is exercised.

The law as it at present stands does not enable these cases to be dealt with in an effective manner, but the new

Milk Bill introduced by the President of the Local Government Board will give greater powers.

The general result of the action of the London County Council in sending inspectors into the county has been the weeding out of obviously tubercular cows, an improvement in the general cleanliness of both cows and cowsheds, and a general awakening of the dairy farmer to the fact that whether he is willing or not he must produce his milk under more satisfactory conditions.

In the annual reports references are made to numerous difficulties, the chief of which appears to be the accumulation of cow manure close to the dairies and cowsheds. Doubtless if the Milk Bill passes the Local Government Board will make a regulation requiring all the accumulations to be kept in covered receptacles or at a certain distance from where the cows are milked and from the dairies. The direct communication between the cooling room and the cowsheds is another objectionable feature at many farms.

BARKING. It is impossible to impress upon the producers and vendors of milk the necessity of scrupulous cleanliness. Public opinion may in time effect this. Difficulties are met with in getting structural alterations made, as dairymen are often poor, and the rents paid do not encourage owners to expend capital in improvements. Covered receptacles in milk shops is insisted upon. The Medical Officer of Health thinks the control of milk supplies should be in the hands of a central authority, so as to secure uniformity.

CLACTON. Strict supervision is exercised here and samples of milk are taken every month for examination. The Medical Officer of Health is empowered to call in a Veterinary Surgeon and have cows tested and examined whenever he thinks this necessary.

EAST HAM. There are 7 registered cowsheds and 134 dairies and milkshops in the borough. Most of the milk comes from surrounding districts, over which the Borough Council has

no control. The Medical Officer of Health thinks that the Dairies, etc., Regulations are practically a dead letter in many parts of the County. (This may have been the case a few year ago, but is scarcely the fact now.)

COLCHESTER. The attention recently given to dairies and cowsheds has resulted in a marked improvement, but clean sheds, clean cows, clean milkers, and clean milk vessels are still desiderate. Too much faith is placed in "straining" to remove filth. Such straining does not remove the bacteria. The "Regulations" in force in the Borough are not up-to-date.

EPPING. The Medical Officer of Health recommends cowkeepers to have their cows periodically examined by a veterinary surgeon.

HALSTEAD. "Regulations" have been adopted and more care is now being exercised in milk production. The Medical Officer of Health appears to lay emphasis on the necessity for straining.

ILFORD. Much attention has been given to the milk supply in this district, and samples of milk have been submitted for microscopical and bacteriological examination. When found to be "dirty" or otherwise unsatisfactory the dairyman has been made acquainted with the results and usually an improvement has resulted. All premises are frequently inspected.

LEYTON. Constant watch is kept to detect tuberculous cows. The Medical Officer of Health found a cow which the veterinary surgeon could not certify was suffering from tuberculosis of the udder. A sample of the milk was submitted "to Dr. Thresh who reported that the guinea pig injected died of septicæmia before the tuberculosis (if such were present) had time to develop. He furthermore reported that pus organisms were found in the milk and that it was clearly unfit for human consumption. On this report we had a serious consultation with the cow keeper, who agreed to our suggestion to have the animal slaughtered, which was accordingly done, and a post

mortem made at the knacker's yard fully confirmed the above observations, for, on opening the carcase, pus poured from both nostrils, and the lungs were found to be riddled with abscesses." The great bulk of the milk used in Leyton is imported.

SOUTHEND. The greater proportion of the milk consumed in the borough is obtained from outside and cannot be controlled. The Medical Officer of Health fears that the action of the London County Council will cause more infected milk to be sent into other districts as it is excluded from London. Efforts are made to dissuade small shop-keepers acting as purveyors of milk.

WALTHAMSTOW. A Special Committee visited all the cowsheds in the district and reported thereon in September. As a result a veterinary inspector has since been appointed and a new series of regulations framed. These do not require the approval of the Local Government Board but the Council has submitted them to the Board for their observations. These regulations are far more comprehensive than any hitherto adopted, and it is to be hoped that the Local Government Board will not object to them.

BILLERICAY. Two outbreaks of anthrax occurred at dairy farms. There was nothing in common between the two save that they used the same foreign cake for feeding. The Medical Officer of Health expresses strong views on the necessity for close supervision to ensure clean milk, and upon the supervision of cows in cowsheds and in the markets to detect tuberculosis. He recommends his Authority never to sanction the building of a cowshed arranged so that the cows face each other since cows cough and thus propagate the disease.

BRAINTREE. The danger of milk infection from the proximity of manure heaps in which flies breed is referred to and the Medical Officer of Health says "it can be a matter of no great difficulty to cart it 20 or 30 yards or more from the cowshed." The necessity for clean hands, clean milking stools, etc., is mentioned.

BUMPSTEAD. Regulations were adopted on April 14th, 1908, and steps are now being taken to enforce them. A number of notices have been served on cow-keepers to cleanse or alter their premises.

CHELMSFORD (R.) Examples are given of the results of the veterinary inspection of certain cowsheds. In one instance two tubercular cows were found and in another several cows were suffering from mastitis, one cow giving milk containing distinct traces of blood.

HALSTEAD (R.) The adoption of "regulations" is said to have caused a general improvement in the condition of the cowsheds in the district.

LEXDEN AND WINSTREE. The Medical Officer of Health has found several cows suffering from tuberculosis. He regrets that he is not empowered by the Authority to take a veterinary surgeon when he inspects such cases.

MALDON (R.) The London County Council found a sample of milk from this district to be tuberculous. The Medical Officer of Health took a veterinary surgeon, who certified that there were 5 cows in poor condition and apparently tuberculous. Another cow was suffering from advanced tuberculosis and the udder was affected. Milk from all these cows was being sent to London. Three months later the five suspicious cows were still being milked and the markedly diseased animal was still on the premises.

TENDRING. Cows which appear tuberculous Dr. Cook recommends the farmer to have slaughtered, or to have the milk examined bacteriologically, as this is done for a small fee at the bacteriological laboratory.

OFFENSIVE TRADES. DISPOSAL OF HOUSE REFUSE.

Offensive trades are chiefly carried on, on the banks of the Thames, as at Barking and Rainham, where there are large manure works, blood drying works, fat extracting works, etc.

Fish offal, slaughterhouse offal, etc., is brought down in barges and by various processes converted into useful products. To prevent nuisances arising strict supervision is necessary. At Barking bye-laws have been adopted with beneficial effect but in the Romford Rural District, where many such trades are established, no bye-laws have been framed.

Enormous quantities of house refuse is brought down from London by barges and deposited on the marsh lands over the sea wall. Some of these tips on the banks of the Thames are acres in extent, and the smoke from the smouldering heaps travels with the wind for considerable distances, and the pungent fumes may often be recognised half a mile or more away. Fortunately the sites are usually chosen with discretion as practically no precautions are taken to prevent nuisances arising.

In several towns trouble occurs from the method of house refuse disposal, since it becomes increasingly difficult to find "tips," and it is apparently equally difficult to find sites for refuse destructors. For example at Ilford it is stated that when the present tip is filled there is no other known to be available, and consequently the erection of a destructor is a matter of urgency. An application was made to the Local Government Board for permission to borrow money to acquire a site but the opposition was such that permission was refused.

The Medical Officer of Health for Chelmsford Borough relates how the Surveyor has to close tip after tip on account of complaints, and he again suggests the provision of a destructor.

In Rural Districts few nuisances of this kind occur, save when an Urban Authority sends in its filth and disposes of it without the slightest regard to the health of the rural community, but in certain localities quantities of London manure comes down by train or barge and the unloading and carting not infrequently give rise to complaint.

Nuisances occasionally arise in large villages like Ingatestone and Great Chesterford because the scavenging of house

refuse is not undertaken by the Sanitary Authorities. In these villages there are houses without available gardens and the tenants, having great difficulty in disposing of the refuse, allow it to accumulate. The Local Government Board requested the Saffron Walden Rural District Council to scavenge Great Chesterford, but as yet the request does not appear to have been complied with. There are doubtless many other parishes the sanitary condition of which would be greatly improved by public scavenging.

OTHER PREMISES, ETC., OVER WHICH THE SANITARY AUTHORITIES EXERCISE CONTROL.

Wherever anything noteworthy is recorded an epitome will be found in the abstracts of the various reports given in the Appendix.

RESULTS OF SYSTEMATIC INSPECTIONS.

These are given in tabular form. There is little doubt that inspection is becoming more systematic, but that there is still room for much improvement is evident from a consideration of the Inspectors' Reports. The comparatively small number of nuisances detected in certain districts does not necessarily signify that these districts are in a better sanitary condition than others in which more nuisances are recorded, as the probable explanation, in many cases, is that more frequent and more careful inspections are made in certain districts than in others. It is becoming increasingly common for Sanitary Inspectors to prepare annual reports and for these to be appended to the Medical Officer's report. Except in large towns this is quite unnecessary since the Medical Officer should include all the information required in his report and merely supplement it by the Tables summarising the work done in the Inspector's department. In large centres of population however, it is an advantage to have a report from the Chief Sanitary Inspector with respect to the work done in his department. Such reports have been prepared by

H. Wood	... Chief Inspector	... Barking
F. W. King	...	... Ilford
J. G. Banks	...	... East Ham
T. Wells	...	... Colchester
H. Miller	...	... Leyton
W. W. West	...	... Walthamstow

and I regret that space does not permit of my quoting from their excellent reports. The matters dealt with include

Results of house-to-house inspections,
 Complaints received and action taken thereon,
 House drainage,
 Common Lodging Houses, Factories and Workshops,
 Dairies and Cowsheds, Bakehouses, Offensive Trades,
 Slaughterhouses,
 Tent and Van Dwellers,
 Sale of Food and Drugs Act—Food Inspection,
 Removal of House Refuse,
 Disinfection and Disinfectants.

The Leigh-on-Sea report contains a Report by the Surveyor.

TABLE XXIII.
URBAN DISTRICTS.

SUMMARY OF REPORTS BY SANITARY INSPECTORS.

	Barking.	Braintree.	Brentwood	Brightlingsea.	Buckhurst Hill.	Burnham.	Chelmsford.	Chingford.	Clacton.	Colchester.	East Ham	Epping.	Frinton.	Grays.	Halstead.	Harwich.	Ilford.	Leigh-on-Sea.	Leyton.	Loughton.	Malden.	Romford.	Saffron Walden	Shoeburyness.	Southend on-Sea.	Waltham Holy Cross.	Walthamstow.	Walton-on-the-Naze.	Wanstead.	Witham.	Wivenhoe.
1. Complaints received ...	142	3	25	10	20		47	16	5	477	1105	14		64	13		297	56	387	27	15	34	25		176	46	197	54	24	3	1
2. Nuisances detected without complaint ...	1626	39	313	31	27		897	71	188	232	2424	72		427	152		1315	147	...	25	40	344	42		579	330	5345	78	...	5	47
3. Nuisances abated ...	1643	27	392	41	23		866	71	179	677	3515	85		467	143		1317	203	...	50	48	372	67		713	402	5468	115	...	8	38
4. Notices served ...	105	16	4	2	9		421	38	172	644	386	2		210	84		1189	44	2078	17	25	329	20		520	...	71	65	34	2	37
5. Summonses taken out ...	...	...	...	...	...		...	...	...	3	3	...		1	...		...	...	...	...	...	8	...		...	...	1	...	...	...	...
6. Convictions ...	...	...	...	...	...		...	...	...	2	2	...		1	...		...	...	...	...	...	6	...		...	...	1	...	...	...	...
7. Cottages inspected ...	2469	174	411	274	...		372	266	573	3583	3807	204		871	312		3677	...	3578	73	240	430	94		1803	284	6074	214	...	...	302
8. Lodging-houses inspected ...	7	...	1	...	...		2	...	...	2	...	...		2	...		...	...	...	...	2	2	...		...	...	...	...	...	...	...
9. Slaughter-houses inspected ...	4	9	7	6	37		9	3	4	23	104	4		6	40		3	8	18	3	4	9	5		167	48	14	...	...	4	...
10. Bake-houses inspected ...	18	19	9	11	44		...	2	8	46	128	5		11	27		32	13	46	5	9	16	13		372	51	57	5	...	...	4
11. Dairies and Milk Shops inspected ...	38	4	3	...	...		29	15	17	212	264	5		31	24		50	12	137	7	11	16	9		436	38	182	4	48	...	4
12. Cowsheds inspected ...	3	5	...	...	74		6	12	4	63	14	4		1	16		8	24	9	6	11	17	14		53	89	16	2	...	...	2
13. Workshops inspected ...	123	27	90	12	191		93	4	90	349	408	16		55	45		477	14	136	24	...	93	126		138	49	161	7	Monthly.	...	2
14. Filthy houses cleansed, sec. 46, Public Health Act, 1875 ...	...	1	5	...	...		12	...	1	...	...	1		7	...		164	...	...	...	...	1	...		3	14	25	1	...	...	...
15. Houses disinfected ...	281	13	49	2	7		43	23	70	750	1804	59		53	14		596	10	728	12	...	60	8		439	42	849	15	...	10	4
16. Overcrowding abated ...	16	...	...	...	...		4	5	...	16	32	3		2	8		7	...	33	...	...	...	...		3	5	45	1	40	1	...
17. Houses placed in habitable repair ...	...	...	10	...	...		...	2	...	...	...	1		14	4		14	...	917	...	...	5	...		...	23	...	...	...	...	...
18. Houses closed ...	...	...	...	...	...		...	...	...	2	...	...		...	...		1	...	...	...	...	...	...		...	5	...	...	...	...	...
19. Houses erected or rebuilt for which Water "Certificates" were applied for ...	...	...	...	...	...		...	...	90	...	...	...		...	...		...	...	...	...	...	...	...		...	...	...	...	...	...	...

TABLE XXIV.

RURAL DISTRICTS.

SUMMARY OF REPORTS BY SANITARY INSPECTORS.

	Belcham.	Billericay East.	Billericay West.	Braintree.	Bumpstead.	Chelmsford.	Dunmow.	Epping.	Halstead No. 1.	Halstead No. 2.	Lexden and Winstreet.	Maldon.	Ongar.	Orsett.	Rochford.	Romford, 1st div.	Romford, 2nd div.	Saffron Walden.	Stansted.	Tendring.
1. Complaints received ...	15	17	35	24	6	19	29	28	6	19	21	21	3	90	91	...	22	10	14	38
2. Nuisances detected without complaint ...	59	209	239	55	29	333	178	290	116	33	172	202	68	215	17	...	133	148	154	125
3. Nuisances abated ...	68	185	223	71	34	308	192	260	98	42	168	186	68	305	99	...	173	158	135	107
4. Notices served ...	19	44	44	46	9	243	82	597	64	30	55	118	20	169	99	...	119	106	35	29
5. Summonses taken out ...	...	2	...	...	...	1	...	1	2	...	...	5	...	15	...	...	...	...	...	7
6. Convictions ..	...	2	...	...	...	1	...	1	2	...	...	4	...	3	...	...	427	408	...	...
7. Cottages inspected ...	293	235	324	165	303	1310	730	793	726	153	232	1077	136	491	82	...	...	...	320	972
8. Lodging-houses inspected ...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Slaughter-houses inspected ...	6	5	6	23	2	8	16	25	5	11	15	23	15	15	4	...	5	10	26	16
10. Bakehouses inspected ...	15	11	9	44	9	35	36	30	8	25	34	25	17	17	3	...	6	29	9	24
11. Dairies and Milk Shops inspected ...	3	6	32	40	35	94	53	...	25	26	7	36	95	28	9	...	14	25	...	...
12. Cowsheds inspected ...	9	31	67	60	35	94	71	140	25	26	10	84	95	42	10	...	12	25	19	86
13. Workshops inspected ...	...	9	20	70	40	84	77	69	46	46	20	56	20	40	...	17	14	119	39	63
14. Filthy houses cleansed, sec. 46, Public Health Act, 1875 ...	23	...	1	...	...	...	4	...	...	1	4	...	...	3	...	4	10	...	...	1
15. Houses disinfected ...	...	...	44	59	...	8	38	76	...	13	65	37	59	165	...	...	156	12	19	66
16. Overcrowding abated ...	7	21	3	...	1	41	5	11	7	1	3	3	4	6	64	...	7	...	3	4
17. Houses placed in habitable repair ...	1	3	...	4	...	10	31	15	1	...	20	14	...	...	...	4	37	...	4	20
18. Houses closed ...	4	2	3	...	...	...	1	...	3	1	...	4	...	...	4	12	4	...	...	...

[illegible]

CHIEF IMPROVEMENTS EFFECTED AND FURTHER IMPROVEMENTS REQUIRED.

It is very much to be regretted that Medical Officers of Health do not, as a rule, give a brief summary at the end of their reports of the Improvements effected and of the Improvements required. This would be of especial value to the Sanitary Authority. In many reports neither of these matters are referred to and it is only by carefully going over the reports that anything can be learned about the improvements effected and usually there are no indications whatever as to the improvements required. A district must be in a very excellent condition indeed if no further improvement is necessary, and if any improvement is necessary it is the duty of the Medical Officer of Health to point it out to the Authority. This pointing out of sanitary requirements is the most important function of the Medical Officer and if he fails in this duty it is not to be expected that the Sanitary Administration can be effective.

In some reports improvements are recorded which had never previously been referred to as necessary. If they were necessary, and about this there can be no doubt, reference should have been made to the requirements in previous reports.

From recent reports the "Improvements required," so far as they can be ascertained, have been tabulated, and the remarks opposite to each indicates the steps taken during the year to effect them.

Urban Districts.	Improvements required.	Improvements recorded in 1908 and Remarks.
BARKING	... 1900. Better system of sewage treatment and sewerage of Creeks- mouth. 1900. Improved ventila- tion of sewers and relay- ing of old sewers. 1900. Refuse destructor. 1902. Public sanitary conveniences for both sexes. 1904. New nursing home and administration block required.	Some progress made.

Urban Districts.	Improvements required.	Improvements recorded in 1908 and Remarks.
BRAINTREE	... 1904. Free treatment of all cases at Isolation Hospital. 1904. An increased water supply.	Provision of new sewage disposal works and provision of an increased supply of water by deepening the bored wells, etc.
BRENTWOOD	... 1900. A public mortuary. 1900. An ambulance. 1905. Removal of refuse by Council's employees. 1906. Improved disposal of refuse. 1906. Improved system of sewerage and sewage disposal. 1907. The provision of an Isolation Hospital.	A scheme has been prepared and submitted to the L.G.B.
BRIGHTLINGSEA	... 1907. Formalin spray disinfectant. 1907. Washing utensils in cowsheds. 1907. Improved sewer ventilation. 1907. Provision of diphtheria antitoxin.	This has been provided. Smells shewn to be due to escape of coal gas. This has now been stopped.
BUCKHURST HILL	...	No report for 1908 received.
BURNHAM ON-CROUCH	1900. Flushing apparatus to w.c.'s 1906. Public sanitary convenience. 1907. Suitable Isolation Hospital.	
CHELMSFORD	... 1900. Improved water supply. 1902. Veterinary Inspector for milch cows. 1903. Refuse destructor. 1905. Sewer ventilation. 1907. Drainage and water supply for Waterhouse Estate. 1908. More frequent removal of house refuse during summer.	Practically completed.
CHINGFORD	...	
CLAFTON	... 1901. Abolition of ash-pits. 1902. Refuse destructor. 1906. Sewerage of Bocking's Elm and Coppin's Wick.	
COLCHESTER	... 1908. Improved accommodation at Isolation Hospital.	

Urban Districts.	Improvements required.	Improvements recorded in 1908 and Remarks.
COLCHESTER	... 1908. Improved regulations for dairies and cowsheds.	...
EAST HAM	... 1906. New mortuary. 1908. Discharge block at Isolation Hospital. 1903. Public Health offices. 1909. Covered public swimming bath.	A public mortuary provided. Considerable additions are being made to the Hospital. ...
EPPING ...	... 1907. Flushing cisterns for w.c.'s. 1908. Adoption of certain sections of the Public Health Acts Amendment Act, 1907. 1908. Scarcity of suitable houses for the need of the district. 1908. Covered carts for the removal of house refuse.	New Building Bye-laws have been adopted.
FRINTON	... 1907. New cemetery.	Surface drainage is being attended to prevent flooding during heavy rainfalls.
GRAYS ...	... 1905. Improvements at sewage works.	
HALSTEAD	... 1904. Re-sewering of the south side of High Street. 1908. Storm waters should be diverted from sewers. 1908. Better ventilation of sewers. 1908. Improvements at sewage outfall works. 1908. A public abattoir.	Engineer consulted.
HARWICH	... 1907. Improved ventilation of sewers in upper portions of the town. 1908. House drains require more attention and drainage of Upper Dovercourt. 1908. More supervision over slaughterhouses, or a public abattoir.	Now arranged for.
ILFORD ...	... 1905. Female Sanitary Inspector. 1906. Free bacteriological examinations. 1906. Provision of dust destructor. 1906. Additional block at Isolation Hospital.	Loan applied for. Being erected.

Urban Districts.	Improvements required.	Improvements recorded in 1908 and Remarks.
ILFORD ...	...	Sewers have been extended, and the water supply laid on, to Aldborough Hatch. Sanitary conveniences have been erected at Goodmayes and Seven Kings. The M.O.H. has become a whole time official.
LEIGH ...	... 1908. Better system of dust and refuse collection.	Roads have been made up and sewage works improved. Public conveniences provided.
LEYTON ...	... 1901. Permanent Isolation Hospital. 1901. More public sanitary conveniences. 1903. Pavement and draining of roadways at rear of shops. 1905. Adequate cleansing of pavements. 1907. More Sanitary Inspectors.	The first one is now being established. Most have now been dealt with. Now kept reasonably clean.
LOUGHTON	... 1908. More frequent removal of house refuse.	
MALDON...	... 1904. Treatment of sewage before discharge into river.	
ROMFORD	... 1907. Flushing apparatus for w.c.'s.	
SAFFRON WALDEN ...	1900. Better system of sewage disposal and extension of sewers.	Scheme has been submitted to L.G.B.
SHOEBURYNESS	... 1907. An increased water supply.	
SOUTHEND-ON-SEA ...	1900. Public abattoir. 1908. Additions to sanatorium. 1908. Making up new streets. 1908. More frequent collection of house refuse. 1908. Sewage disposal works.	Still required. Some additions being made. Parliamentary powers obtained. Two sanitary conveniences erected.
WALTHAM HOLY CROSS	1903. Bye-laws enforcing pavement of yards. 1904. Improved water supplies in certain localities. 1907. Secondary contact bed at sewage works.	Not since referred to. Not since referred to. Not since referred to.

Urban Districts.		Improvements required.	Improvements recorded in 1908 and Remarks.
WALTHAMSTOW	..	1903. More public sanitary conveniences.	
		1904. Pavement of passages at rear of premises.	
		1904. Infants' milk depot.	
		1906. Public abattoir.	
		1906. Improved disinfecting station.	
WALTON - ON - THE NAZE		1903. Isolation Hospital accommodation.	The Public Health Acts Amendment Act, 1907, adopted. A code of bye-laws may be considered.
		1904. Bye-laws for houses let in lodgings.	
		1907. Revision of bye-laws generally.	
WANSTEAD	...	1907. Ventilation shafts for sewers.	
WITHAM...	...	1900. Isolation Hospital.	
WOODFORD.	...	1903. Filling up stagnant ponds.	Two of the worst have been cleaned out.
		1908. Prevention of dust from motor traffic.	
Rural Districts.			
BELCHAMP	...	1901. Isolation Hospital.	
		1906. More district nurses.	
BILLERICAY	..	1904. Less stringent building bye-laws.	Have been made less stringent.
		1905. Water supply for Basildon, Laindon, and elsewhere.	In part provided.
		1907. Improvements of Brook Street sewage works.	Being attempted.
		1900-1908. Sewerage of Billericay referred to annually.	
BRAINTREE	...	1900. Building bye-laws.	Apparently not since referred to.
		1907. Water supply to Bocking and Coggeshall.	Now being provided.
		1908. Sewerage of Kelvedon.	Scheme submitted to Parish Council.
		1908. Sewerage at Hatfield Peverel.	
BUMPSHEAD	...		
CHELMSFORD	...	1901. Water supply for Stock.	Often considered. No feasible scheme yet suggested.
		1906. Sewerage for Broomfield.	Scheme prepared.
		1906. Water supplies for West Hanningfield and Buttsbury.	No scheme yet devised at a reasonable expense.
		1907. Water supply for Broomfield.	
		1908. Improved drainage of Little Waltham and Woodham Ferris.	

Rural Districts	Improvements required.	Improvements recorded in 1908 and Remarks.
DUNMOW	... 1908. Better sewerage and system of sewage disposal at Dunmow and Thaxted. 1908. Water supply for Dunmow, Felstead, Thaxted, and Hatfield.	Provided for Felstead and Dunmow, and being provided for Hatfield.
EPPING ...	... 1902. New ambulance. 1903. Improved drainage of parts of North Weald. 1905. Sewerage of northern portion of Theydon Bois. 1906. Drainage of Duck Lane and Thornwood. 1907. Observation Ward at Isolation Hospital. 1908. Better housing accommodation to relieve overcrowding.	Has now been provided. Agreement with Loughton now terminated. Chigwell sewerage scheme completed.
HALSTEAD I.	... 1908. Water supply for Earls Colne and White Colne. 1908. No building bye-laws.	
HALSTEAD II.	... 1903. Bye-laws for drainage and for keeping and slaughtering of animals. 1908. The drainage of several parishes requires attention.	
LEXDEN & WINSTREE	1902. Sewerage of West Mersea, Rowhedge, and Stanway. 1903. Proper Isolation Hospital. 1905. Better examination of water supplies of cottages. 1907. Improved water supplies at Wigboroughs, West Mersea, and Abberton. 1908. Provision of portable ashbins where contractors remove refuse.	
MALDON	... 1908. Water supply for Tollesbury, Tolleshunt D'Arcy, and other parishes. 1908. Extended scavenging at Tolleshunt D'Arcy. 1908. Improved sewerage system at Southminster.	Well bored at Mundon. Well deepened, etc., at Heybridge Basin. Sanction obtained from L. G. B. for trial bore at Tollesbury. Water mains extended at Tip-tree. Slight improvement effected.

Rural Districts.	Improvements required.	Improvements recorded in 1908 and Remarks.
ONGAR ...	... 1900. Isolation Hospital. 1907. Improved water supplies for isolated cottages.	
ORSETT ...	... 1902. Drainage at West Thurrock and Aveley. 1904. Water supply to Laindon Hills and elsewhere.	Water mains extended to Orsett Heath. A cesspool emptying van tank provided for Aveley.
ROCHFORD	... 1900. Drainage for Rayleigh, Hadleigh, South Benfleet, Great Wakering and Rochford.	
ROMFORD	... 1907. Completion of Dagenham sewerage scheme. 1907. Extension of water mains to Havering. 1908. Systematic inspection of house drains.	Still not completed. Now being done. At Hornchurch 90 per cent. of drains found defective.
SAFFRON WALDEN ...	1904. Sewerage systems for Newport and Great Chesterford, if they can be provided at reasonable cost. 1908. Scavenging of Great Chesterford.	
STANSTED	... 1907. More cottages for the working classes.	
TENDRING	... 1900. Sewerage of Manningtree, Mistley, Lawford, Thorpe, Little Clacton, and Great Bentley. 1905. An Isolation Hospital for a combined district. 1906. Water supply to Ardleigh. 1908. Water supply to St. Osyth.	

COUNTY PUBLIC HEALTH LABORATORY

CHELMSFORD.

The following Table summarises the work done in the Laboratory during the year :—

CHEMICAL DEPARTMENT—

Samples of river water and effluents			
examined	82		
Samples of potable waters examined ...	183		
Samples of food examined, suspected of			
causing illness	3		
			<hr/>
Total	268		<hr/>

BACTERIOLOGICAL DEPARTMENT—

Diphtheria diagnosis	460		
Phthisis „	36		
Typhoid „	68		
Ringworm	12		
Shell fish and other food suspected of			
causing illness	18		
Samples of potable water examined ...	70		
			<hr/>
Total	664		<hr/>

The following fees for Bacteriological and Chemical Examinations have been fixed by the County Council :—

	s.	d.
The Bacteriological diagnosis of Diphtheria,		
Typhoid Fever and Tuberculosis ... each	2	6

Results are communicated by post (or telegrams if required within 24 hours).

	£	s.	d.
Analysis of sewage or sewage effluent ...	0	10	6
More complete analysis ...	1	1	0
Sanitary analysis of drinking waters ...	1	1	0
Bacteriological examination of drinking waters ...	1	1	0

Other Chemical and Bacteriological Examinations bearing upon Public Health are undertaken at reasonable fees.

Instructions for collecting samples, suitable bottles, and outfits are sent promptly upon application to

DR. THRESH,

CHELMSFORD.

APPENDIX.

SUMMARY OF REPORTS OF MEDICAL OFFICERS OF HEALTH.

I. PORT SANITARY AUTHORITIES.

COLCHESTER.

Medical Officer of Health—C. A. S. LING, M.R.C.S.,
Brightlingsea.

No case of illness has occurred.

Five hundred and twenty-two vessels were inspected, most of which were coasting barges ; 63 were coasting or sea going sailing vessels and 25 steamships.

Defects were found in five.

The hospital is in good condition and ready for any emergency.

HARWICH.

Medical Officer of Health—DR. GURNEY, Dovercourt.

Only one case of illness, and one death occurred in the Port during the year. The Local Government Board having complained of the inadequacy of the hospital accommodation a vessel is to be purchased for use as a floating hospital. So few cases of infectious disease have ever been introduced that it is more economical to destroy infected bedding and clothing than to provide a disinfecting apparatus. No vessel now arrives from abroad without being inspected. The bulk of the vessels entering the port either belong to H.M. Navy or to the Great Eastern Railway Company, and in the latter the sanitary arrangements are most modern.

ii.

Arrangements have been made for carrying out the Local Government Board Order relating to the examination of imported meat and an Inspector has been engaged for the purpose.

1,379 vessels arrived at the port from foreign parts and 2,563 coastwise. This shews a small decrease on the previous year.

MALDON.

Medical Officer of Health—H. REYNOLDS BROWN, M.A.,
M.D., C.M.

The chief imports are timber and road granite, the exports hay, straw and grain.

No passengers, cattle or meat enter the port.

Of the 1,072 vessels which entered during the year only 30 were from abroad.

All the foreign vessels and 350 coastwise were inspected, but no sanitary defects were found.

The port joins with the Borough and Maldon Rural in the use of the well equipped hospital at Heybridge.

II. URBAN SANITARY DISTRICTS.

BARKING.

Medical Officer of Health—C. F. FENTON, M.R.C.S., L.R.C.P.

Area in acres, 1901 census (land and inland water) 3,803

Population, 1901 census	...	...	21,547
„ 1908, estimated...	...	...	30,000
Deaths registered in the district	...	...	323
Corrections	...	Additions	53
„	...	Deductions	0
Nett Death-rate	...	1908. 12·4	Previous 10 years. 14·5
Infantile Mortality	...	117	155
Birth-rate	...	30·8	34·1
Cases of notifiable diseases per			
1,000 population	...	8·2	10·3

The water supplied by the South Essex Company has been satisfactory and efforts are being made to enable each house to draw drinking water direct from the mains instead of through the cistern, and the Council is advised not to allow new houses to obtain a supply from a cistern. Only 26 houses now obtain water from other sources than the Company's mains.

Great attention has been given to dairies, cowsheds and milkshops, but only about one quarter of the milk used in the town is produced therein. The Medical Officer of Health deals somewhat fully with this subject and quotes the resolutions passed at a recent Conference of Health Authorities on "The Milk Supply and Tuberculosis." All milk shops are now required to store the milk in a covered receptacle.

The knacker's yard at Creeksmouth has given rise to complaints, but new premises are being erected of a better character, "absolutely up-to-date."

Several offensive trades have been established during the year and one factory has been a serious nuisance. A new plant

is being installed, which it is hoped will effectually stop all complaint.

Loxford Water and the River Roding have not given rise to much complaint.

Scavenging is done by the Council's men. Some of the courts require more attention.

The house-to-house inspection revealed many defects and a list is given of those not yet remedied.

Creeksmouth is not yet sewered ; it requires linking with the main sewerage system. An "Exhauster" has been obtained for emptying cesspools and is proving a good investment.

The Housing of the Working Classes was never so good as now. A good house can be obtained at 5s. 6d. per week inclusive of rates, and there are 2,326 houses letting at 5s. 6d. per week and under. The cottages owned by the Council let fairly well and are practically self supporting.

The Notification of Births Act has been in force for one year and 757 births out of 924 registered were notified. The Lady Inspector visits as often as may be required and encourages and instructs the mother. A milk depôt was opened and dried milk supplied, and the results were very satisfactory indeed. The deaths amongst the infants fed on "Glaxo" was only 4·7 per cent., whereas amongst infants not so fed it was 11·7 per cent., and all the "Glaxo" fed infants were suffering from some defect or the mother was weakly.

An accident ambulance has been provided and has proved very useful.

The mortuary admits of great improvement.

The report also deals with the results of the medical inspection of school children. No difficulties were encountered and Dr. Fenton thinks it will prove "of the greatest utility in advancing the physical well being of the nation."

The improvement of the accommodation for the Nursing Staff, etc., at the hospital is under consideration.

This is an excellent report and is supplemented by a report of the Sanitary Inspector, shewing that 2,592 premises were inspected and 1,864 sanitary defects found.

Since March last the County Council has undertaken the duty of collecting samples under the Food and Drugs Acts, the arrangement being that not less than three samples per 1,000 population should be collected annually.

BRAINTREE.

Medical Officer of Health—PERCY R. STEVENS, L.R.C.P.,
M.R.C.S.

Area in acres 1901 census (land and inland water) 2,224

Population, 1901 census	5,330
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„ 1908 estimated	5,330
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Deaths registered in the district	...	75
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Corrections	...	Additions	...	11
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„	...	Deductions	...	1
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			1908.		Previous 10 years.
Nett Death-rate	15·9	...	15·5
Infantile Mortality	97	...	81
Birth-rate	21·01	...	23·14
Cases of Notifiable diseases per					
1,000 population	...	5·2	...	5·7	

This is a very short written report.

No. 1 well at the waterworks is being deepened and a suction gas plant installed.

The Local Government Board has sanctioned a loan of £7,000 for works of sewerage and sewage disposal. There will be double filtration at works situated farther from the populous part of the town than the present farm.

BRENTWOOD.

Medical Officer of Health—S. FRAZER, L.R.C.P., L.R.C.S.

Area in acres, 1901 census (land and inland water) 460

Population, 1901 census	...	...	4,932
„ 1908 estimated	...	...	7,747
Deaths registered in the district	...	...	51
Corrections	...	Additions	10
„	...	Deductions	0
Nett Death-rate	...	1908.	Previous 10 years.
	...	7·8	10·3
Infantile Mortality	...	61·5	101·8
Birth-rate	...	16·7	18·4
Cases of notifiable diseases per			
1,000 population	...	6·9	4·3

This urban district forms part of what is “practically a large town and is under the sanitary administration of three different authorities, Brentwood Urban, Romford Rural, and Billericay Rural Councils.”

The condition of the housing of the working classes has immensely improved during the last two or three years. There are no known cases of overcrowding.

A loan has been applied for in order to carry out a comprehensive scheme of sewerage and for improving the sewage works. All modern houses have proper water closets, but many of the older ones have hand-flushed closets.

The scavenging contractor removes the house refuse about once a week, but has difficulty in finding suitable sites for depositing the refuse. The expediency of providing a “destructor” is a subject for serious consideration.

The water supply from the South Essex Waterworks has given no cause for complaint.

Many cases of infectious disease had to be treated at home as they could not be accommodated at the Billericay Hospital. An Isolation Hospital is required “but this is a matter which must obviously be taken into consideration with a scheme for enlarging the area of the town.”

BRIGHTLINGSEA.

Medical Officer of Health—E. P. DICKIN, M.D., C.M.

Area in acres, 1901 census (land and inland water) 2,867

Population, 1901 census ... 4,501

„ 1908 estimated ... 4,950

Deaths registered in the district ... 44

Corrections ... Additions ... 6

„ ... Deductions ... 0

			1908.	Previous 10 years.
Nett Death-rate	10	13

Infantile Mortality	90	88
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Birth-rate	15.5	23.7
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Cases of notifiable diseases per

1,000 population	1.8	3.9
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Tank water closets and slop water closets are in general use and the householders keep them in an inoffensive condition but continued care is obviously necessary for this end. The sewage is treated with alumino-ferric and the effluent is discharged into the Colne estuary and gets out to sea. The sludge is carted away for manuring land and a “smell” is sometimes complained of. The question of ventilating the sewers has been postponed, as there have been few complaints since an escape of coal gas into the sewers was stopped.

The public water supply is ample and of good quality, but the houses in the rural part of the district are supplied from shallow wells.

The cowkeepers do not provide facilities for the milkers to keep their hands clean.

The schools are in a good sanitary condition.

There is no lack of house accommodation. A contractor removes all house refuse in a satisfactory manner.

Care is taken to prevent the pollution of the oyster layings here.

Forty-seven tons of unsound salmon were seized, condemned and destroyed.

BUCKHURST HILL.

Medical Officer of Health—C. R. DYKES, M.R.C.S., L.R.C.P.

Area in acres, 1901 census (land and inland water) 873

Population, 1901 census	...	...	4,786
„ 1908 estimated	...	...	5,300
Deaths registered in the district	...		84
Corrections	...	Additions	1
„	...	Deductions	9
		1908.	Previous 10 years.
Nett Death-rate	...	14·34	10·98
Infantile Mortality	...	188·6	101·8
Birth-rate	...	20	21·9
Cases of notifiable diseases			
per 1,000 population	...	·9	4·3

The increase of population is not marked. Eleven new houses were erected during the year.

The sewage works have been improved and give satisfactory results. The sewers and drains generally are in good condition.

House refuse is removed by the Council's men and a house-to-house inspection of the dust-bins has been made.

The water supply is from the Metropolitan Water Board works and is hard. The supply is constant and adequate.

BURNHAM-ON-CROUCH.

Medical Officer of Health—W. C. P. SMITH, M.R.C.S.,

L.R.C.P., D.P.H.

Area in acres, 1901 census (land and inland water) 4,517

Population, 1901 census	...	...	2,919
„ 1908 estimated	...	...	3,240
Deaths registered in the district	..		32
Corrections	...	Additions	1
„	...	Deductions	...

			1908.	Previous 10 years.
Nett Death-rate	...	...	10·1	...
Infantile Mortality	...	...	30	...
Birth-rate	...	...	20·6	...
Cases of notifiable diseases per				
1,000 population	...	...		...

CHELMSFORD (BOROUGH).

Medical Officer of Health—H. W. NEWTON, M.R.C.S.,
L.R.C.P., D.P.H.

Area in acres, 1901 census (land and inland water) 2,854

Population, 1901 census ... 12,580

„ 1908 estimated ... 17,200

Deaths registered in the district ... 232

Corrections ... Additions ... 0

„ ... Deductions ... 51

			1908.	Previous 10 years.
Nett Death-rate	...	...	10·5	12·8
Infantile Mortality	...	...	67·6	93·4
Birth-rate	...	...	22·9	24·5

Cases of notifiable diseases per

1,000 population ... 2·1 ... 7·1

The borough was enlarged last year by the inclusion of Springfield Village and the Waterhouse Estate. Water has been supplied to the houses on the estate and the sewers are laid ready for the drain connections.

The condition of the sewers and drains is said to be satisfactory, but “the ventilation of the sewers continues to remain practically at a standstill.” “It is now three years since this work was sanctioned by the Local Government Board.”

The underdraining of the sewage farm has been commenced.

Considerable difficulty is met with in finding suitable tips for the house refuse. More frequent removal, especially from

cottage premises, is advocated, and in hot weather. The provision of a Refuse Destructor does not appear to have been considered during the year.

The water supply continues to receive attention. Remedying defects has "saved an enormous amount of water." There is practically a constant supply in the North Ward, and 75 per cent. in the South Ward now are so supplied. The available water, however, is limited and "a further supply should be available in case of urgency."

Attention is being given to dairies and cowsheds. A Veterinary Inspector has been appointed to examine animals sent to the market.

The Medical Officer urges the necessity for enlarging the Isolation Hospital.

CHINGFORD.

Medical Officer of Health—GEO. W. FULCHER, M.B., C.M.

Area in acres, 1901 census (land and inland water) 2,807

Population, 1901 census	...	...	4,373
„ 1908 estimated	...	...	6,710
Deaths registered in the district	...		74
Corrections	...	Additions	13
„	..	Deductions	23
Nett Death-rate	..	1908. 9·5	Previous 10 years. 12·5
Infantile Mortality	...	49	117
Birth-rate	...	24·4	23·4
Cases of notifiable diseases per			
1,000 population	...	6·2	5·9

Notwithstanding the healthy position of the district the Medical Officer of Health thinks "sanitation labours under difficulties, owing to the imperfect construction of houses erected before the incorporation of the Council, and occupied chiefly by the working classes, also by the lack of cleanliness and of domestic economy of many of the occupants."

The report on the sanitary conditions generally is very brief. The sewage treatment works efficiently. The scavenging contractor removes house refuse weekly in an efficient manner.

Attention is directed to the filthy condition of many of the railway cars, owing to the disgusting habit of expectoration. The Railway Company forbids the nuisance, but seems to take no steps to commit the offenders.

CLACTON-ON-SEA.

Medical Officer of Health—JOHN W. COOK, M.D.

Area in acres, 1901 census (land and inland water) 4,069				
Population, 1901 census	...	...	7,453	
„ 1908 estimated	...	...	7,993	
Deaths registered in the district	...	108		
Corrections	...	Additions	...	7
„	...	Deductions	...	12
Nett Death-rate	...	...	1908. 12·88	Previous 10 years. 12·6
Infantile Mortality	...	...	118	122·2
Birth-rate	...	...	21·14	24·9
Cases of notifiable diseases per				
1,000 population	...	6·3	...	9·42

The district is said to enjoy more sunshine than any other town within easy reach of London, and the rainfall to be the lowest in England. The assessable value at the end of the year was £53,000, and the outstanding loans £43,475, about £4,000 being for private streets. Ninety new houses were erected during the year.

The water supply maintains its high quality. It is examined every month.

The dairies and cowsheds are under strict supervision. There has been no necessity to take a Veterinary Surgeon to examine any cow (as Dr. Cook is empowered to do), since he has not seen a single animal which appeared to be tuberculous.

The sewers could with advantage be extended to Bocking's Elm and Coppin's Wick. The sewage is discharged by two outlets into the sea.

The house refuse is removed by the Council's own men, horses and carts, and deposited two miles from the town, where it is sorted and some of it burned, by a contractor.

The sanitary arrangements at the schools are satisfactory. Under a Local Act the Medical Officer of Health has special powers to enter schools and examine children.

COLCHESTER.

Medical Officer of Health—W. G. SAVAGE, M.D., B.Sc., D.P.H.

Area in acres, 1901 census (land and inland water)				11,333
Population, 1901 census	...	...		38,373
„ 1908 estimated...		...		41,450
Deaths registered in the district		...		515
Corrections	...	Additions	...	0
„	...	Deductions	...	32
				1908. Previous 10 years.
Nett Death-rate	...	...	11·65	... 14·18
Infantile Mortality	...	...	90	... 124
Birth-rate...	...	...	23·55	... 25·
Cases of notifiable diseases per				
1,000 population	...	4·9	...	6·8

The water supply has been examined monthly and invariably found of excellent quality. The amount used averaged 18·3 gallons per head per day.

Dairies and cowsheds are receiving attention, but it is to be regretted that the “Regulations” do not include those of the “Model” requiring cleanliness of the cows udders and milkers hands.

The places in which sausages, meat pies, etc., are made are inspected and in most of the premises the importance of cleanliness is recognised. Fresh sausage skins were found to be infected with bacteria of intestinal type, whilst the salted

skins were free from these organisms. Fortunately the salted skins are chiefly used.

The house-to-house inspection continues and in 548 houses 250 nuisances were detected. The total number of houses inspected was 3,583.

Special supervision has been exercised over the homes containing babies. Enquiries as to feeding were made in 668 cases and it was found that in 471 instances the children were entirely breast fed up to 6 months old, and 74 others were partly breast fed. These figures are very satisfactory. The use of the long tube feeding bottle is decreasing.

EAST HAM.

Medical Officer of Health—G. SOWDEN, M.D., D.P.H.

Area in acres, 1901 census (land and inland water) 3,326

Population, 1901 census	...	...	96,018
„ 1908 estimated...	...	...	142,976
Deaths registered in the district	...	...	1,181
Corrections	...	Additions	265
„	...	Deductions	27
Nett Death-rate	...	1908. 9·9	Previous 10 years. 12·8
Infantile Mortality	...	104	140
Birth-rate	...	24·7	32·8
Cases of notifiable diseases per			
1,000 population	...	11·4	11·3

This volume includes reports on the Isolation Hospital and on the Elementary Schools, and a report by the Chief Sanitary Inspector, besides that on the Sanitary Condition of the Borough.

The population at the middle of the year was estimated at 142,976 by the Registrar General, but the Medical Officer of Health believes that 135,912 is near the mark, and this is based on the number of occupied houses. The statistics are based on the former estimate and are therefore probably too low.

For example the death-rate given as 9·9 is probably 10·5. Whichever estimate is correct the rate is very low, and only one large town in the kingdom had a lower rate during 1908.

The Corporation owns 220 tenement houses, and 32 of them are let to the West Ham Guardians for the accommodation of boarded-out children.

The bacteriological laboratory increases in usefulness. 784 examinations were made therein during the year.

Many houses originally erected for the accommodation of single families have been made into tenement houses. No certificate of exemption from Inhabited House Duty is given until they are properly adapted for use by two families.

Bye-laws under the Employment of Children Act have been adopted to prevent excessive hours of work, since such excessive hours "must have a deleterious effect on both the mental and physical development of the children, and therefore becomes a matter affecting the public health." A copy of the bye-laws is included in the report:

Plans for a new mortuary are being prepared.

New building bye-laws have been adopted, bringing them up-to-date. They will "certainly tend to promote sound and sanitary building construction."

The provision of greater space for each individual house is advocated, to do away with the dreary monotony of the long rows of exactly similar houses, so characteristic of the majority of the present streets.

At the sewage works clinker filter beds are being constructed, in order to further purify the effluent.

The refuse destructor furnishes the heat necessary for pumping the sewage, and the arrangement tends both to efficiency and economy.

The water supply by the Metropolitan Water Board is satisfactory, and the covering of storage cisterns is insisted upon.

At the Isolation Hospital an observation ward and scarlet fever block are nearly completed, and a central system of heating is to be adopted for all the buildings.

The Inspector's report deals with all the subjects dealt with in his department and shows that 5,095 primary inspections were made during the year. 3,727 nuisances were detected. A detailed list of these, together with the ward in which they occurred, is recorded, and it deals with many points of interest. The advantage of paved yards is becoming recognised and little difficulty is now experienced in getting owners to do the necessary paving.

The contractor for house refuse collection is no longer paid by the hour, but at a fixed sum per annum. "The sequence to this change is no overtime, bigger loads, and fewer of them. The change is an excellent one and works admirably."

EPPING.

Medical Officer of Health—TREVOR FOWLER, L.R.C.P. & S.I.,
D.P.H.

Area in acres, 1901 census (land and inland water)					1,420
Population, 1901 census					3,789
,, 1908 estimated					4,342
Deaths registered in the district					75
Corrections		...	Additions	...	0
,,		...	Deductions	...	30
			1908.	Previous 10 years.	
Nett Death-rate	...	...	10·3	...	13·0
Infantile Mortality	...	...	75·2	...	112·4
Birth-rate	...	...	21·4	...	24·0
Cases of notifiable diseases per					
1,000 population		...	12·2	...	4·4

In this district the poorer classes have a difficulty in obtaining decent dwellings, and there are many old cottages which would be condemned were this not the case. There is some overcrowding.

The sewerage of the district is of so difficult a character that four separate outfalls have had to be provided. All are working satisfactorily, and there is no stream pollution.

House refuse is removed fortnightly by a contractor and it would be an improvement if he used covered carts.

The water supply from the Essex and Herts Company is abundant and of good quality, but it would be a boon to the district if the Company would reduce the hardness before distributing it.

The milk supply has given rise to no complaints, but the Medical Officer of Health directs attention to the powers now possessed by the London County Council and suggests to dairymen the desirability of having their cows periodically examined by a veterinary surgeon.

Bye-laws for slaughterhouses are being adopted.

The public elementary schools have been inspected, and the drainage of the non-provided school requires attention.

FRINTON-ON-SEA.

Medical Officer of Health—H. W. GODFREY, M.D.

Area in acres, 1901 census (land and inland water) 403

Population, 1901 census	...	...	644		
„ 1908 estimated	...	...	1,500		
Deaths registered in the district		...	8		
Corrections	...	Additions	...	0	
„	...	Deductions	...	0	
		1908.	Previous 5 years.		
Nett Death-rate	...	...	5·3	...	7·4
Infantile Mortality	...	...	Nil	...	74
Birth-rate	...	...	22	..	21·4
Cases of notifiable diseases per					
1,000 population	...	...	2·6	...	1·3

Building operations are active, new roads are being made up and sewerred.

The securing of a site for a burial ground is an imperative necessity.

House refuse is collected, but apparently complaints are made. The Medical Officer of Health thinks there would be fewer such complaints if the householders burnt more of the garbage.

The storm overflows also give rise to complaint.

The water supply is everthing that can be desired.

“With a low death-rate and a high birth-rate the Council may rest satisfied that the hygienic conditions cannot be unsatisfactory.” (This reasoning is very fallacious. The character of the population accounts for both the low birth-rate and low death-rate. Moreover these rates are practically valueless as guides in such small populations.)

GRAYS.

Medical Officer of Health—JOHN A. WARD, M.D.

Area in acres, 1901 census (land and inland water) 1,359

Population, 1901 census	13,834
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„ 1908 estimated	15,750
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Deaths registered in the district	...	123
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Corrections	...	Additions	...	23
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„	...	Deductions	...	0
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		1908.		Previous 10 years.
Nett Death-rate	...	9·3	...	11·6

Infantile Mortality	...	89	...	110
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Birth-rate	...	28·1	...	33·4
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Cases of notifiable diseases per

1,000 population	...	4·1	...	12·5
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The water supply is from the South Essex Water Co., and was constant and plentiful.

The demand for houses has diminished considerably, and though about 200 are unoccupied a four-roomed cottage continues to let for 7s. a week.

The surface water drains are being extended to prevent flooding in times of heavy rainfall. The question of a joint scheme of sewage disposal for the town and parishes around has not yet been settled, no scheme acceptable to both the Urban and Rural District Councils having been devised.

Some of the oldest property in the town has had all outside defects remedied.

An old bakehouse and one slaughterhouse have become disused. Slaughterers were supplied with pamphlets issued by the Society for the Prevention of Cruelty to Animals, and most of the cattle are now felled by means of the "Humane Killer" in place of the poleaxe formerly employed, and the former practice of suspending calves previous to stunning them will be considered in the future a contravention of the bye-laws.

Attempts to convert unsuitable premises into common lodging houses were successfully resisted.

HALSTEAD.

Medical Officer of Health—C. GORDON ROBERTS, M.B.

Area in acres, 1901 census (land and inland water) 647

Population, 1901 census	...	...	6,073
„ 1908 estimated	...	...	6,100
Deaths registered in the district	...	...	107
Corrections	...	Additions	1
„	...	Deductions	13
Nett Death-rate	...	1908. 15·6	Previous 10 years. 15·6
Infantile Mortality	...	178·2	117·4
Birth-rate	...	16·5	22·6
Cases of notifiable diseases per			
1,000 population	...	3·4	8·7

An Inspector of the Local Government Board visited the town during the year and afterwards issued a report directing attention to certain defects.

Sewerage. The provision of separate sewers for surface water is recommended to prevent sewage during periods of storm being conveyed to the river by the storm water overflows. The further ventilation of the sewers is also advocated. The sewage farm is waterlogged and exerts very little purifying effect. The sludge deposited is often the cause of nuisance. An engineer has been consulted on the question of improving the method of purifying the sewage. Meantime large quantities of ashes are being carted to the farm to dig into and lighten the soil.

Water Supply. In the poorer parts of the town a single standpipe often serves two or more houses, and leads to much waste of water.

The more frequent removal of manurial matter from the proximity of houses is advocated, and the provision of a public abattoir.

There is still a demand for cottages to let at 3s. to 4s. per week, but it is doubtful whether cottages can be erected to pay at such a rent. There are many old and small cottages but all are in fair habitable condition.

HARWICH.

Medical Officer of Health—H. GURNEY, L.R.C.P., M.R.C.S.

Area in acres, 1901 census (land and inland water) 1,541

Population, 1901 census	10,079
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„ 1908 estimated...	11,188
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Deaths registered in the district	168
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Corrections	...	Additions	...	14
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„	...	Deductions	...	0
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			1908.		Previous 10 years.
Nett Death-rate	16·2	...	12

Infantile Mortality	137·3	...	108
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Birth-rate	29·1	...	30
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Cases of notifiable diseases per

1,000 population	...	2·6	...	3·9
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This is one of the few reports which is not printed.

Though the death-rate has been unusually high no death is attributed to drinking impure water or from defective sanitation.

Flooding of the lower part of the town is again threatened during rain storms and extra pumping power is being provided. The sewers are inadequately ventilated and many of the house drains are improperly constructed. The drainage of Upper Dovercourt continues in an unsatisfactory condition.

The existing slaughterhouses are too near dwelling houses and give rise to constant complaints.

The Medical Officer has inspected the schools and school children. He thinks the Act will "prove of untold advantage to the future of the race."

ILFORD.

Medical Officer of Health—C. F. STOVIN, M.A., L.S.A., D.P.H.

Area in acres, 1901 census (land and inland water) 8,496				
Population, 1901 census	...	...	41,234	
„ 1908 estimated	...	...	76,295	
Deaths registered in the district	...	...	836	
Corrections	...	Additions	...	95
„	...	Deductions	...	299
		1908.	Previous 10 years.	
Nett Death-rate	...	8·9	...	10·3
Infantile Mortality	..	79·8	...	109·6
Birth-rate	... ..	23·2	...	28·3
Cases of notifiable diseases per				
1,000 population	...	9·0	...	8·5

This report contains a large spot map shewing the distribution of the cases of infectious disease notified during the year.

Water Supply. That portion of the district West of Cranbrook Road is supplied by the Metropolitan Water Board,

the remainder is supplied by the South Essex Water Co. In consequence of many well waters proving to be impure, an arrangement has been made with the latter Company to extend their mains to Aldborough Hatch.

Milk Supply. The dairies generally are improving and are satisfactory, but the cowsheds admit of considerable improvement. A milk submitted to examination was found to be polluted with filth from the flanks, etc., of the cows. The firm supplying the milk being communicated with "resulted in increased care and improvement being made."

Meat Supply. There are only three licensed (annually) slaughterhouses. Only a very small proportion of the meat consumed in the district is killed in the town. A small quantity only was condemned during the year.

Scavenging. This is now done by the Council's men, and the collection is weekly. An application has been made to the Local Government Board for a loan for the erection of a dust destructor. (The Local Government Board has since refused its sanction.)

Sewerage and Sewage Disposal. Certain sewer extensions have been made. During the year one of the septic tanks at the sewage works exploded, but though much damage was done, no one was injured. There were complaints during the year of a nuisance arising from the Wanstead Sewage Works, which adjoins Ilford, being separated only by the River Roding.

Mr. King, the Chief Sanitary Inspector, gives an excellent resumé of the work done in his department. He has three assistant Inspectors under him. They have, apparently, had a good deal of difficulty with tent and van dwellers, and Mr. King says: "Existing powers seem quite inoperative, and it is quite time the Legislature adopted some stringent measures to prevent them trespassing upon private lands, living in squalor under insanitary conditions, besides allowing the children to remain uneducated."

LEIGH-ON-SEA

Medical Officer of Health—W. DOUGLAS WATSON,

M.R.C.S., L.R.C.P.

Area in acres, 1901 census (land and inland water) 2,332				
Population, 1901 census	...	...	3,667	
„ 1908 estimated	...	...	6,352	
Deaths registered in the district	...	59		
Corrections	...	Additions	...	5
„	...	Deductions	...	0
Nett Death-rate	...	1908. 10·1	...	Previous 10 years. 12·1
Infantile Mortality...	...	82·7	...	100·5
Birth-rate	...	20·9	...	24·8
Cases of notifiable diseases per				
1,000 population	...	1·1	...	11·2

The town continues to increase, and the older houses are gradually disappearing, but the older part of the town is in an unsatisfactory condition. A report on this area has been considered during the year.

House refuse is removed by a contractor and apparently complaints are numerous. But the work is efficiently performed on the whole.

The Leigh works have been connected with the water mains of the Southend Company and a constant supply of excellent water has been maintained.

The sewage works have been improved and tidal water excluded from the sewers. The result is that a better effluent is maintained.

The report includes an interesting account of the public elementary schools, and the Medical Officer of Health regrets the action of the County Council in appointing special inspectors instead of utilizing the services of the local Medical Officers of Health.

Many improvements effected during the year are chronicled.

LEYTON.

Medical Officer of Health—J. F. TAYLOR, M.R.C.S., D.P.H.

Area in acres, 1901 census (land and inland water) 2,594

Population, 1901 census ... 98,912

„ 1908 estimated... 121,200

Deaths registered in the district ... 1,179

Corrections . . Additions ... 6

„ ... Deductions ... 0

			1908.	Previous 10 years.
Nett Death-rate	..	...	9·8	... 12·0
Infantile Mortality	...	...	78·8	... 121·6
Birth-rate	...	...	25·3	... 29·8
Cases of notifiable diseases per				
1,000 population		...	7·6	... 8·6

The sanitary staff consists of five Sanitary Inspectors (four males and one female), two clerks, and an Assistant Medical Officer of Health, besides the Medical Officer of Health. The town is described as one of the dormitories of London. The inhabitants are chiefly clerks, who have no particular interest in the town, and who readily migrate from one district to another. The town being very modern there are practically no slums, the roads are wide, and the houses up to modern standards.

House refuse removal is done by contract at a cost of £3,000 per annum. The refuse is collected twice weekly and is burnt at the destructor works.

There are only nine cowkeepers in the district. These are kept under supervision, but greater cleanliness of the cows is greatly to be desired.

Two prosecutions were undertaken against persons for having in their possession carcasses of tuberculous animals. A fine of £10 and costs was inflicted in one case.

A scheme for taking the sewage of Leyton, Edmonton, Enfield, and Walthamstow into the London County Council sewers is under consideration. A new 5ft. sewer between the end of Sidmouth Road and the sewage works has been laid at a

cost of £3925. This was necessary on account of the flooding which followed heavy rainfalls.

Many two-storied dwellings have been converted into tenement houses. The Medical Officer of Health insists upon each of the two families occupying such houses having a cooking stove with oven, a sink, and water tap. A separate w.c. is not insisted upon.

The Chief Sanitary Inspector's report gives details of inspections, nuisances discovered, etc. Certain milk was suspected of being infected by the scarlet fever organism and 75 gallons was destroyed. 18½lbs. of butter was also destroyed. The outworkers premises, public eating houses, etc., are periodically inspected.

A quantity of unsound food, animal and vegetable, was seized and destroyed.

The report on the examination of school children is appended.

LOUGHTON.

Medical Officer of Health—A. BUTLER-HARRIS, M.A., M.B.

Area in acres, 1901 census (land and inland water) 3,961

Population, 1901 census	...	...	4,730
„ 1908 estimated	...	...	5,900
Deaths registered in the district	...	...	43
Corrections	...	Additions	0
„	...	Deductions	2
Nett Death-rate	...	1908.	Previous 10 years.
	...	7·3	8·7
Infantile Mortality	...	87·3	90
Birth-rate	...	17·4	22·1
Cases of notifiable diseases per			
1,000 population	...	2·5	4·8

A house-to-house inspection has recently been made with great advantage to the district.

Debden Green and Rectory Lane are not sewered, but the emptying of the cesspools is regularly supervised.

The bacterial system of sewage treatment is working admirably.

The removal of house refuse is more satisfactory, but a regular weekly collection is advocated.

The water supply from the Metropolitan Water Board works is hard, but otherwise very satisfactory.

The schools are in good order, both as regards sanitation and ventilation, and notification by the head teachers is proving of service.

The sanitary authority is said to be alive to its responsibilities and the general condition is regarded as very satisfactory. This appears to be borne out by the vital statistics.

MALDON.

Medical Officer of Health—H. REYNOLDS BROWN,

M.D., C.M.

Area in acres, 1901 census (land and inland water) 3,028

Population, 1901 census	5,565
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„ 1908 estimated	5,701
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Deaths registered in the district	...	126
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Corrections	...	Additions	...	3
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„	...	Deductions	...	37
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		1908.		Previous 10 years.
Nett Death-rate	...	15·6	...	14·7

Infantile Mortality	...	50	...	105
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Birth-rate	...	24·6	...	24·1
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Cases of notifiable diseases per

1,000 population	...	10·5	...	9·9
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This report is now printed and contains some interesting diagrams shewing the decline of the general death-rate and of the mortality amongst infants year by year since 1879. The decline set in in 1892 and has been marked and continuous.

Unfortunately the birth-rate shews a greater fall. It was 30·6 in 1879-1888 and is now 24·2.

There are some old houses, which are badly built and crowded together, but the newer houses comply with the modern bye-laws.

The water supply only averages 13 gallons per head per day. A considerable economy has been effected during the year by replacing old and leaky mains.

The sewage is discharged untreated into the Blackwater Estuary. The low-lying part of the town near the station is not sewered and the provision of pail closets here is being encouraged.

House refuse is removed weekly by public scavengers.

Certain defects in the elementary schools are recorded, but two schools have been provided with a water supply.

The Isolation Hospital (serving a portion of the Maldon Rural District also) received 28 cases. There are two ward blocks and the Medical Officer of Health says "a third block would sometimes be of great service."

ROMFORD.

Medical Officer of Health—A. WRIGHT, M.R.C.S.

Area in acres, 1901 census (land and inland water) 5,630

Population, 1901 census	13,656
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„	1908 estimated...	...	16,300
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Deaths registered in the district	...	285
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Corrections	...	Additions	...	11
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„	...	Deductions	...	108
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			1908.	Previous 10 years.
Nett Death-rate	11·5	...
Infantile Mortality	90	...
Birth-rate	25·9	...
Cases of notifiable diseases per				
1,000 population	...	...	16·1	...

The report gives a list of all the notified cases of infectious disease and of the nuisances which have received the Medical Officer's attention.

There is no account of the sanitary condition of the district nor of the sanitary administration.

SAFFRON WALDEN.

Medical Officer of Health—W. ARMISTEAD, M.B.

Area in acres, 1901 census (land and inland water) 7,502

Population, 1901 census	5,896
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„ 1908 estimated	6,396
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Deaths registered in the district	...	106
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Corrections	...	Additions	...	1
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„	...	Deductions	...	30
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		1908.		Previous 10 years.
Nett Death-rate	...	12·0	...	13·6

Infantile Mortality	...	125	...	115
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Birth-rate	...	17·5	...	19·3
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Cases of notifiable diseases per

1,000 population	...	1·1	...	5·3
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The house accommodation has greatly improved of recent years, and strict supervision is exercised over new buildings.

The water mains have been extended in Peasland Road and Thaxted Road and an extension to Little Walden is contemplated.

The water derived from a deep well in the chalk is softened before being distributed. The rest level in the well only varied about three feet throughout the year.

An eminent firm of engineers is preparing a scheme for a new sewage disposal works. The impure effluent from the present works flows into the River Cam.

The house refuse is removed weekly, the “ D ” card system being in vogue.

SHOEBURYNESSE.

Medical Officer of Health—M. H. RAPER, M.D., M.R.C.S., D.P.H.

Area in acres, 1901 census (land and inland water) 1,036

Population, 1901 census	...	...	4,081
„ 1908 estimated	...	...	4,608
Deaths registered in the district	...		28
Corrections	...	Additions	2
„	...	Deductions	0
Nett Death-rate	...	1908. 6·5	Previous 10 years. 12·3
Infantile Mortality	...	50·6	126
Birth-rate	...	34·3	34·3
Cases of notifiable diseases per			
1,000 population...	...	2·6	7·7

The high birth-rate and low death-rate in this district is extraordinary.

The public supply of water, from a deep well, has become insufficient for the needs of the town. The Council is giving this subject their attention.

It is a garrison town and many of the soldiers live in the town and are changed every few months.

The sewerage system has been improved by the re-laying of a portion of the sewers on the Cambridge estate. The sewage is discharged untreated into the sea.

The ash pits and earth closets (only about 30 of the latter) are cleared by a contractor in a satisfactory manner.

SOUTHEND-ON-SEA.

Medical Officer of Health—C. GRANT PUGH, M.D., D.P.H.

Area in acres, 1901 census (land and inland water) 5,172

Population, 1901 census	...	..	28,857
„ 1908 estimated	...	..	57,399
Deaths registered in the district	..		519
Corrections	...	Additions	40
„	...	Deductions	20

		1908.	Previous 10 years.
Nett Death-rate ...	...	9·39	13·03
Infantile Mortality ...	...	93·62	142·9
Birth-rate ...	...	19·1	23·8
Cases of notifiable diseases per			
1,000 population ...	...	5·1	7·9

The population is estimated upon the number of inhabited houses, allowing 5·3 persons per house, the average at the last census. The Medical Officer of Health, however, points out that during recent years larger houses have been erected and therefore that the resident population may be underestimated.

Forty-two per cent. of the infants who died during the year were insured. The appointment of a tactful Lady Health Visitor is advocated.

Thirteen of the twenty cases of typhoid fever are attributed to shell fish and some cases of diarrhoea and vomiting were caused by the eating of oysters picked up from disused oyster beds, which are liable to pollution. The Health Committee have taken steps to prevent, as far as possible, the eating of shell fish from such sources until after purification.

The Medical Practitioners make extensive use of the facilities provided by the Council for free bacteriological examination at the Borough Laboratory.

An Isolation Hospital is an absolute necessity in a town like Southend, and the existing one is not sufficiently large for the borough, with its continually increasing population. A new pavilion for 18 beds is being provided. Other necessary extensions are under consideration.

In the outlying portions of the town there are many cesspools which are frequently a source of nuisance. A scheme involving an outlay of £160,000 is before Parliament for the construction of several miles of deep sewers, a pumping station, detritus and septic tanks, percolating filters, and a new outfall sewer into the Thames estuary about $1\frac{1}{2}$ miles below high water mark.

The house refuse is collected by the Council's men and sent to various tips and brickworks. Application was made to

the Local Government Board for sanction to erect a destructor on the land now proposed to be used for the sewage works, but the necessary consent has not been obtained, "the Board doubtless awaiting the passing by Parliament of the Corporation Bill dealing with the sewage scheme."

Many houses built in recent years to let at £28 to £32 per annum have been sub-divided into two tenements without the separate provision of sculleries, w.c.'s, etc. The houses erected by the Borough Council continue to let well. The standard of cleanliness amongst the very poor is apparently no higher at Southend than elsewhere, but it is hoped that the attention now being given to personal hygiene in the schools will have good effect.

Considerable attention is directed to the supply of milk and of food generally.

The water supplied by the Water Company maintained a high standard of purity. On the average 22·46 gallons is supplied per head per day. There is extremely little wastage.

The abattoir question is discussed and it is pointed out that it would be of little use unless the butchers would agree to use it and abandon their private slaughterhouses, and this is considered "somewhat doubtful."

The report also contains an account of the public elementary schools and the arrangements made for the medical inspection of school children.

Dr. Pugh succeeded Dr. Nash (now Medical Officer of Health to the Norfolk County Council) at midsummer, and the latter gentleman contributes a couple of pages to this report.

WALTHAM HOLY CROSS.

Medical Officer of Health—J. DAMER PRIEST, M.R.C.S.,
D.P.H.

Area in acres, 1901 census (land and inland water) 11,017

Population, 1901 census	6,549
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„ 1908 estimated	6,925
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Deaths registered in the district	...	70
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Corrections	...	Additions	...	8
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„	...	Deductions	...	5
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	1908.	Previous 10 years.
Nett Death-rate ...	10·54	12·28
Infantile Mortality...	125·7	117·2
Birth-rate ...	22·96	26·49
Cases of notifiable diseases per 1,000 population ...	4·7	5·0

The water supply is from the Lea Road Well of the Metropolitan Water Board and has been exceedingly satisfactory.

Certain cases of diphtheria have occurred in homes where fowls were kept. Some had recently died and the Medical Officer of Health thinks avine diphtheria and human diphtheria are closely allied.

A leaflet of an educational character has been distributed, setting forth the diseases spread by the house fly.

The Medical Officer of Health suggests including anthrax, glanders, and hydrophobia in the schedule of compulsorily notifiable diseases.

The percolating filters at the sewage works continue to give results satisfactory to the Lea Conservancy.

House refuse is removed by a contractor, and after screening is used in the furnaces at the sewage works.

Cards of a lasting description are distributed, as occasions arise, among young mothers, setting forth in simple language the many details incidental to the bringing up of infants.

The standard of sanitary efficiency in the district is said to be increasing.

WALTHAMSTOW.

Medical Officer of Health—J. J. CLARKE, L.R.C.P., D.P.H.

Area in acres, 1901 census (land and inland water) 4,343

Population, 1901 census ... 95,131

„ 1908 estimated... 131,486

Deaths registered in the district ... 1,017

Corrections ... Additions ... 252

„ ... Deductions ... 11

		1908.	Previous 10 years.
Nett Death-rate	... ..	9·6	... 12·4
Infantile Mortality	... ..	100·8	... 134·6
Birth-rate	... ..	26·5	... 31·8
Cases of notifiable diseases per			
1,000 population	... ..	7·7	... 9·9

As usual this is a very full and excellent report, and Dr. Clarke shows how favourably the mortality statistics for the town compare with those for England and Wales and with the larger towns. He thinks, however, that the population is slightly overestimated and that it is nearer 125,000 than 131,486, which is the Registrar General's estimate.

Water Supply. The supply is provided by the Metropolitan Water Board and has been constant and of good quality. More attention is being given to the proper covering of water cisterns, Section 35 of the Public Health Amendment Act of 1907 being very useful for this purpose.

Two premises on which offensive trades were carried on have been closed. The adoption of Bye-laws for the keeping of pigs is advocated, and it is recommended that the "boiling of offal or pig wash" should be declared an offensive trade.

A good deal of unsound meat was condemned and one butcher was prosecuted and fined. The necessity for supervising the slaughtering of animals, and the difficulty of doing this in private slaughterhouses is exemplified. In one case a prize beast when killed was found to be suffering from tuberculosis.

House refuse is collected twice weekly and during the year 15,000 tons of such refuse was burnt in the destructor. The County Council bye-laws against the sweeping or throwing of waste matters into the streets are not properly enforced by the police.

New Regulations under the Dairies and Cowsheds Order have been made but their adoption is awaiting the approval of the Local Government Board. A veterinary surgeon has been

appointed to examine all milk cows and he commenced his duties in March of the present year (1909).

The sewage disposal works do not give such good results as the Lea Conservancy Board desire and negotiations are in progress for the reception of the sewage in the London system. "There is every likelihood that such a solution of our sewage difficulty is not far off."

The housing accommodation is ample. The Medical Officer of Health seldom gives certificates under the Customs and Revenue Acts for tenement houses owing to the want of proper provision for food storage and of adequate sanitary conveniences.

As School Medical Officer, Dr. Clarke reports on the work done in this department, and Mr. West, the Chief Sanitary Inspector, gives a full account of the excellent work done in his department.

WALTON-ON-THE-NAZE.

Medical Officer of Health—J. W. COOK, M.D.

Area in acres, 1901 census (land and inland water)	2,065
Population, 1901 census	2,015
„ 1908 estimated	2,173
Deaths registered in the district	23
Corrections	1
„	0
1908.	Previous 10 years.
Nett Death-rate	11·67
Infantile Mortality...	93·02
Birth-rate	21·94
Cases of notifiable diseases per	
1,000 population	3·2

An outbreak of scarlet fever occurred early in the year and a house was hired and converted into a temporary hospital.

Few houses are being erected but two large sanatoria are in course of construction.

The sewerage and drainage is regarded as satisfactory. A contractor removes the house refuse daily. The water supply from the Tendring Hundred Waterworks has been plentiful and of good quality.

The Medical Officer of Health thinks bye-laws should be adopted for "houses let in lodgings." There has been no alteration in the Bye-laws and Dr. Cook thinks that his having directed attention to them in last year's report was one of the chief causes of another Medical Officer being appointed.

An isolation hospital is desirable.

WANSTEAD.

Medical Officer of Health—F. ARGLES, M.R.C.P. ED., M.R.C.S.

Area in acres, 1901 census (land and inland water) 1,679

Population, 1901 census	...	...	9,179
„ 1908	...	...	12,530
Deaths registered in the district	...		89
Corrections	...	Additions	11
„	..	Deductions	1
Nett Death-rate	...	1908. 7·9	Previous 10 years. 9·9
Infantile Mortality	...	60·7	94·5
Birth-rate	...	19·7	20
Cases of notifiable diseases per			
1,000 population	...	4	8·6

Improvements in widening roads, pulling down old property and the laying out of building estates are chronicled.

The sewage works have been improved by the construction of additional bacteria beds, etc.

The Isolation Hospital has received cases from the West Ham Union, the Union Schools, and Chigwell Row, as there was the requisite accommodation.

The erection of ventilating shafts connected with the sewers is recommended as the existing ventilating openings are frequently blocked.

The water supply from the Metropolitan Water Board was constant and of good quality.

House refuse is collected weekly by a contractor.

WITHAM.

Medical Officer of Health—K. GIMSON, M.B., B.CH.

Area in acres, 1901 census (land and inland water) 3,706

Population, 1901 census	...	...	3,454
„ 1908 estimated	...	...	3,598
Deaths registered in the district	...		37
Corrections	...	Additions	0
„	...	Deductions	0
Nett Death-rate	...	1908. 10·2	Previous 10 years. 12·5
Infantile Mortality	...	37·5	101
Birth-rate	...	22·2	20·7
Cases of notifiable diseases per			
1,000 population	...	3·3	5

This is one of the few reports which has not been printed.

The housing accommodation has been greatly improved during the last two years.

The sewers are liable to be overcharged and are not thoroughly ventilated. The sewage is treated on a small farm and during floods some of the sewage gets into the River Blackwater. There are many houses not connected to the sewers, and several groups of closets flushed from a common cistern, which is liable to get out of order.

The Council's men empty the moveable dustbins weekly. Where there are ashpits the householders have to send notice to the Inspector when they require them emptied.

The water supply has been greatly improved by the new works.

The only offensive trade is that of a fellmonger and as the premises are too low to drain into the town sewers the effluent from the works is discharged into the River Brain.

WIVENHOE.

Medical Officer of Health—G. PENDER-SMITH, L.S.A.

Area in acres, 1901 census (land and inland water) 1,564				
Population, 1901 census	...	...	2,560	
„ 1908 estimated	...	...	3,000	
Deaths registered in the district	...		28	
Corrections	...	Additions	...	4
„	...	Deductions	...	0
Nett Death-rate	...	...	1908. 10·6	Previous 10 years. 12·2
Infantile Mortality	...	...	128·6	99·3
Birth-rate	...	...	21	21·6
Cases of notifiable diseases per				
1,000 population	...	2·6	...	6·2

The public water supply from a deep well in the chalk has been plentiful and of excellent quality. Many houses are not yet connected and an extension of the mains is contemplated.

The number of people engaged in home work, the making of wearing apparel, has greatly diminished of recent years, few people now being engaged in this occupation.

House refuse is removed by the Council's scavengers, and they also empty the pail closets and cesspools. Many houses drain directly into the river. There is no public system of sewers and nuisances often arise from overflowing cesspools, etc.

WOODFORD.

Medical Officer of Health—W. G. GROVES, M.R.C.S.

Area in acres, 1901 census (land and inland water) 2,161				
Population, 1901 census	...	...	13,798	
„ 1908 estimated...	...	...	19,632	
Deaths registered in the district	...		140	
Corrections	...	Additions	...	9
„	...	Deductions...		2

			1908.	Previous 10 years
Nett Death-rate	...	...	7·5	10·8
Infantile Mortality	...	...	63·2	127·2
Birth-rate	...	...	20·2	24·9
Cases of notifiable diseases per				
1,000 population	...	...	4·6	6·2

There has been a considerable change in the character of the population during the last 10 or 15 years. Several of the larger houses with more or less extensive grounds have disappeared, and the grounds have been divided up into small building plots.

The water supply from the Metropolitan Water Board is very hard, but otherwise very good. The water cisterns in the older houses are often in very unsuitable positions.

House refuse is collected weekly by a contractor and on the whole is done satisfactorily.

The sewage works are giving good results. The older sewers now and again give considerable trouble. Several lengths have been relaid during the year.

Much attention has been given to the subject of infantile mortality. The Notification of Births Act has been adopted and a Health Visitor appointed, but apparently the Notification Act is to be rescinded, and the Medical Officer of Health thinks the result will be disappointment. The results of the Health Visitor's work was regarded as being satisfactory and as promising well for the future.

The schools have been inspected and a number of defects recorded. Two of the worst ponds have been cleansed. The dust nuisance is referred to and attention directed to the danger to health from inhaling dried horse manure.

III. RURAL DISTRICTS.

BELCHAMP.

Medical Officer of Health—J. SINCLAIR HOLDEN, M.D.

Area in acres, 1901 census (land and inland water) 26,500

Population, 1901 census	4,847
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„ 1908 estimated	4,847
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Deaths registered in the district	...	56
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Corrections	...	Additions	...	12
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„	...	Deductions	...	0
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			1908.		Previous 10 years.
Nett Death-rate	14·0	...	14·2
Infantile Mortality	77·7	...	77·5
Birth-rate	...	...	18·6	...	18·0
Cases of notifiable diseases per					
1,000 population	...		3·5	...	4·2

The housing accommodation is generally good, but there are some exceptions. No building bye-laws have been adopted.

There is a sewer at Foxearth and the brewery effluent is now treated chemically. This “has almost entirely remedied the nuisance in the sewage ditch.”

Destruction of fish in the River Stour occurred during February. It was found to be due to washings from Melford Gasworks. Special tanks have been constructed at the works to prevent this again occurring.

Several private wells have been sunk and a number of samples of water submitted for analysis.

Two district and maternity nurses continue to render valuable hygienic aid in three of the largest parishes.

BILLERICAY.

Medical Officer of Health—D. WELLS, M.B., CH.B.

Area in acres, 1901 census (land and inland water) 49,391

Population, 1901 census ... 15,192*

,, 1908 estimated... 15,192*

Deaths registered in the district ... 241

Corrections ... Additions ... 0

,, ... Deductions . . 9

			1908.	Previous 10 years.
Nett Death-rate	12·7	13·7

Infantile Mortality	68·5	90·6
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Birth-rate	26·9	25·6
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Cases of notifiable diseases per

1,000 population	...	6·4	...	6·3
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The Isolation Hospital was not sufficient for the requirements of the district during the year and enlargement is urgently required, especially if Brentwood cases are still to be taken. The subject has been under consideration but no action has yet been taken.

There is a want of cottages in the district, and consequently some overcrowding. There is need for action on the part of the authority

Water Supply. The Southend Company's mains now pass through Vange, Pitsea, Bowers, North Benfleet, Nevendon, Wickford, Basildon, Laindon, Great Burstead, Ramsden Crays, Ramsden Bellhouse, and Downham. The reservoir at Billericay has been completed and many houses are now supplied with water therefrom. There are many parts of the district where a water supply is greatly needed.

Sewerage. The sewage of Billericay continues to pollute one of the tributaries of the River Crouch. In the report for 1900 the Medical Officer of Health said "Billericay is still without its drainage. In 1899 a Local Government Board enquiry was held and a system of drainage was approved." Apparently nothing however has been done.

*Excluding Asylum and Barracks; including Workhouse.

The report contains interesting references to anthrax and tuberculosis in cows and the necessity for better supervision of the sources from which milk is derived.

BRAINTREE.

Medical Officer of Health—H. G. K. YOUNG, B.A., M.R.C.S.,
L.R.C.P.

Area in acres, 1901 census (land and inland water) 62,291				
Population, 1901 census	...	...	18,106	
„ 1908 estimated...	...	...	18,106	
Deaths registered in the district	...		273	
Corrections	...	Additions	...	3
„	...	Deductions	...	15
		1908.	Previous 10 years.	
Nett Death-rate	...	14·3	...	14·2
Infantile Mortality	...	98·3	...	82·1
Birth-rate	...	20·0	...	19·9
Cases of notifiable diseases per				
1,000 population	...	3·2	...	4·6

Water Supplies. There is some doubt whether the deep well will yield sufficient water and a further test pumping is to be carried out. The well sunk at Coggeshall yields a superabundance of water and it is proposed to include Kelvedon in the water area.

Sewage Disposal. A scheme for sewerage Kelvedon has been approved but difficulty has arisen about the acquisition of a site for the disposal works. Difficulties have arisen at Hatfield Peverel, and a small scheme of sewerage is being considered.

BUMPSTEAD.

Medical Officer of Health—W. ARMISTEAD, M.B.

Area in acres, 1901 census (land and inland water) 11,874				
Population, 1901 census	...	...	2,541	
„ 1908 estimated	...	...	2,299	
Deaths registered in the district	...		37	
Corrections	...	Additions	...	3
„	...	Deductions	...	0

			1908.	Previous 10 years.
Nett Death-rate	...	...	17·3	14·8
Infantile Mortality	...	...	134	83
Birth-rate	...	...	22·6	24·1
Cases of notifiable diseases per				
1,000 population	...	...	4·7	5

This district appears to be decreasing in population. The housing accommodation is fairly adequate. Bye-laws were adopted in 1907, and some supervision is now exercised over building operations.

The water supply generally is from wells in the chalk, but on the high ground this can only be reached by sinking through a thick layer of boulder clay. The difficulty of obtaining water tends to cause depopulation, notably at Bailey Hill.

There is no system of sewers in any parish. There are short lengths in various villages. Complaints were made to the Essex County Council about the pollution of the Stour by the sewage of Haverhill. The complaint was well founded but it was ascertained that the sewage of Sturmer also polluted the stream. Steps, it is said, are being taken to improve the Haverhill effluent, but it is not stated whether the other sources of pollution are receiving attention.

There is no public scavenger in the district.

The schools have all been inspected.

A small hospital, for four beds only, is provided by the Clare and Bumpstead Joint Hospital Board.

CHELMSFORD.

Medical Officer of Health—J. C. THRESH, M.D., D.Sc.

Area in acres, 1901 census (land and inland water) 83,849

Population, 1901 census	...	...	23,717
„ 1908 estimated	...	...	20,650
Deaths registered in the district	...	...	242
Corrections	...	Additions	48
„	...	Deductions	3

			1908.	Previous 10 years.
Nett Death-rate	...	...	13·9	13·5
Infantile Mortality	..	...	69	87
Birth-rate	..	...	23·9	22·7
Cases of notifiable diseases per				
1,000 population	...		2·7	6·4

The housing accommodation generally is satisfactory, but in many parishes a few more cottages could be desired. The building bye-laws are not excessively stringent and are judiciously enforced.

The various public water supplies are kept in good order, and up-to-date. The mechanical filter installed at Writtle has been paid for by aid of a loan. An application was received for a supply of 10,000 gallons a day from the Ingatestone works for an estate at Buttsbury, but as the Ingatestone Parish Council objected the application was not entertained. The Southend Water Company have applied for permission to supply certain houses in Buttsbury parish where it adjoins Billericay.

The waters for public supplies are periodically examined, chemically and bacteriologically.

Sewerage matters in various parishes have received attention. A scheme for Broomfield has been prepared; one for Woodham Ferris is being considered.

An additional parish, Widford, is now scavenged by a contractor.

Pea pickers and summer holiday children receive a good deal of attention. Lists are obtained from the association sending down children and the houses to which they are sent are visited. The number of people engaged in peapicking is not large and they remain in the district a very short time. Tent and van dwellers are beginning to give trouble at Woodham Ferris. They are being driven from their usual haunts and now occasionally pitch on vacant building plots, without knowledge or sanction of the owners.

DUNMOW.

Medical Officer of Health—E. E. GOODBODY, M.D.

Area in acres, 1901 census (land and inland water) 73,503

Population, 1901 census	...	...	15,705
„ 1908 estimated...	...	...	15,440
Deaths registered in the district	...	...	225
Corrections	...	Additions	2
„	...	Deductions	3
Nett Death-rate	...	1908.	Previous 10 years.
Infantile Mortality	...	14·5	15·6
Birth-rate	...	55·5	86
Cases of notifiable diseases per	...	22·2	21·9
1,000 population	...	4·6	4·5

During the last five years a good deal of building has been going on in and around Dunmow and probably the decrease in the population has been arrested.

During the year an Inspector of the Local Government Board visited the district and his report thereon has aroused considerable interest. Many references are made to it by the Medical Officer of Health.

A house-to-house inspection is proceeding, to ascertain the character of the cottages generally and the extent to which overcrowding prevails. The difficulties in the way of effecting improvements in such a purely rural area are discussed.

There is no proper system of sewerage in any parish, but the road drains have been utilised as sewers in many places. The Chelmer is polluted to a certain extent by the sewage of Thaxted and of Dunmow. These two centres of population require especial attention. Scavenging is also required in the more populous areas.

Bye-laws for regulating building and for other purposes are required.

During the year the Mid-Essex District Water Co. has completed the waterworks at Felstead. The supply to Great

Dunmow is from a chalk well. The water is pumped into a reservoir of 50,000 gallons capacity and distributed to all parts of the town by gravitation. Comparatively few houses have been connected to either system.

The Herts and Essex Water Company is extending mains to supply Hatfield Broad Oak and Hatfield Heath. Thaxted is in want of a public supply.

EPPING.

Medical Officer of Health—TREVOR FOWLER, L.R.C.P.

AND S.I., D.P.H.

Area in acres, 1901 census (land and inland water) 39,055				
Population, 1901 census	...	...	12,783	
„ 1908 estimated	...	...	13,946	
Deaths registered in the district	...		151	
Corrections	...	Additions	...	13
„	...	Deductions	...	5
Nett Death-rate	...	1908.	11·4	Previous 10 years.
Infantile Mortality	...	102·8	...	88·7
Birth-rate	...	20·2	...	23·1
Cases of notifiable diseases per				
1,000 population	...	6·1	...	5·1

The housing accommodation, though improving, still remains inadequate, and there is consequently much overcrowding. A farm house at Magdalen Laver was converted into a kind of baby farm. It was apparently unfitted for the purpose and overcrowded. Several deaths occurring from diarrhœa, the S.P.C.C. prosecuted. The prosecution failed, “but there was no doubt as to the overcrowding and the insanitary state of the house being at least primarily responsible for the deaths of some of these unfortunate children.”

Sewerage. Harlow, Chigwell, and Theydon Bois are sewered and have proper disposal works. Potter Street

and North Weald Gullet require sewers. The scheme for sewerage Roydon at an expense of £4,830 has not yet received the sanction of the Local Government Board. Sewerage is urgently required, but the expense seems enormous for so small a village.

Scavenging is done by contract in Chigwell, Harlow, and Potter Street.

Water Supply. Water is provided over certain areas by the Metropolitan Water Board and over others by the Herts and Essex Water Co., and the mains of the latter have just been extended through Netteswell, Rye Hill, and Broadley Common to Roydon. There are certain areas still with unsatisfactory supplies.

The milk supply is not abundant, nearly all produced in the district being sent to London. The Medical Officer of Health says "it is increasingly common among the poor in this district to receive 'nurse-children' from London, but as long as the present scarcity of new milk continues this is a custom not to be recommended."

The isolation hospital accommodation was severely taxed during the year, and many cases admitted were of a septic type. There were, however, no fatalities. It has been decided to determine the agreement with Loughton whereby that district will be deprived of the use of the hospital. An enlargement is contemplated, by the provision of an observation ward, but the area of land available appears to be too small.

HALSTEAD No. 1.

Medical Officer of Health—J. H. ASHWORTH, M.D.

Area in acres, 1901 census (land and inland water) 18,072

Population, 1901 census	...	...	4,481
„ 1908 estimated	...	...	4,697
Deates registered in the district	...	...	57
Corrections	...	Additions	9
„	...	Deductions	0

			1908.	Previous 10 years.
Nett Death-rate	...	...	14	12·9
Infantile Mortality	...	...	94	97·9
Birth-rate	...	...	22·5	20·4
Cases of notifiable diseases per				
1,000 population	...		3·4	6·3

Many very defective old houses exist in the district. There are no building bye-laws. Three houses have been closed at Pebmarsh, being unfit for human habitation.

The district is fairly well supplied with water, and the public wells are properly protected.

Since regulations were adopted for dairies and cowsheds the majority has been renovated as the result of inspections.

There appears to be no system of sewers in any village. With the exception of Earls Colne there is no large centre of population.

The lower parts of Earls Colne and White Colne are in need of a better supply of water.

HALSTEAD No. 2.

Medical Officer of Health—J. B. BROMLEY, M.R.C.S.

Area in acres, 1901 census (land and inland water) 20,518

Population, 1901 census ... 5,695

„ 1908 estimated ... 5,695

Deaths registered in the district ... 59

Corrections ... Additions ... 4

„ ... Deductions ... 0

			1908.	Previous 10 years.
Nett Death-rate	...	...	11	14·3
Infantile Mortality	...	...	63·6	75·3
Birth-rate	...	...	19·3	22·3
Cases of notifiable diseases per				
1,000 population	...		2·6	4·6

The cottage isolation hospital at Castle Hedingham has been improved.

Several new public wells have been provided. The parish sewers, and the ditches into which they discharge, appeared to be well attended to.

“Bye-laws for drainage and for keeping and slaughtering of animals” are required.

LEXDEN AND WINSTREE.

Medical Officer of Health—J. W. COOK, M.D.

Area in acres, 1901 census (land and inland water) 69,637

Population, 1901 census	18,572
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„ 1908 estimated	19,812
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Deaths registered in the district	...	229
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Corrections	...	Additions	...	9
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„	...	Deductions	...	3
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		1908.		Previous 10 years.
Nett Death-rate	...	11·86	...	13·8

Infantile Mortality	...	56·4	...	83·6
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Birth-rate	...	21·8	...	22·2
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Cases of notifiable diseases per

1,000 population	...	4	...	3·8
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The housing accommodation is improving—good cottages, complying with the bye-laws, superseding the old and defective structures. The Medical Officer of Health thinks no person should be allowed to commence building until he has shewn that a proper supply of water is available.

Sewerage. The sewerage of Dedham has given satisfactory results. Referring to certain other parishes, the Medical Officer of Health says, “My remarks in last year’s report were the cause of the County Council investigating the need of sewers at West Mersea and Stanway, but beyond the report no steps have been taken. Considerable new building is going on at both places.”

Scavenging of house refuse and of privies, etc., is undertaken in West Mersea and Rowhedge. The usual dust-hole

near houses is believed to have been the cause of an outbreak of diphtheria at Marks Tey.

The water supply in the southern portion of the district is very deficient and it is difficult to see how this can be remedied. A spring, which might have served a portion of the district, was acquired by a neighbouring authority for supplying houses in their district. An extension of the mains into the Lexden district is suggested.

The Medical Officer of Health is not empowered by the Council to call in a veterinary inspector for the examination of cows supposed to be suffering from tuberculosis, nor is the Sanitary Inspector under the control of the Medical Officer, hence he has not the requisite control over the former which is requisite for the efficient administration of the district.

There is a large number of outworkers in the district, apparently engaged in making clothing for Colchester firms. Infectious disease occurred in four houses where women did tailoring. Proper steps were taken to prevent the spread of infection by means of the clothing.

MALDON.

Medical Officer of Health—J. C. THRESH, M.D., D.SC.

Area in acres, 1901 census (land and inland water) 82,342

Population, 1901 census	...	...	14,633
„ 1908 estimated...	...	...	14,800
Deaths registered in the district	...	...	166
Corrections	...	Additions	24
„	...	Deductions	2
Nett Death-rate	...	1908. 12·7	Previous 10 years. 14·4
Infantile Mortality	...	61	91
Birth-rate	...	24·4	24·6
Cases of notifiable diseases per			
1,000 population	...	3·2	5·3

This report contains a comparison between the sanitary condition of the district now and 20 years ago, when the Medical Officer of Health was first appointed. There has been some increase in the population of the district and it is quite possible that the death-rates, etc., are over estimated.

Water Supplies. The water mains at Tiptree have been considerably extended, partly at the cost of the Council and partly at the cost of a land owner. Improvements have been effected in the Southminster and Purleigh water areas, and the Local Government Board has sanctioned a loan for a trial bore at Tollesbury. This has not been carried out yet. A new deep well is being sunk at Mundon, and the deep well supplying Heybridge Basin has been re-bored.

Sewerage and Sewage Disposal. The disposal works at Tollesbury, Tolleshunt D'Arcy, and Tillingham are kept in good order. A small works has been installed at Latchingdon. An account is given of the pollution of the Laver Marney Brook by a brewery outside the district.

Public scavenging is undertaken in several parishes.

The Housing of the Working Classes is improving. The colony at Mayland, established by Mr. Fels, appears to flourish. French gardening is also being introduced near Tiptree. The Commons Act has been adopted and bye-laws made to deal with squatters on Totham Plains and Tiptree Heath.

Pea Pickers. A fair number of tramps and families come into the district for the pea picking and frequently no accommodation is provided for them. The Rural District Council is powerless, since it has been found that the adoption of bye-laws has resulted in making matters worse than before. So long as a farmer makes no provision whatever for the people employed he has no bye-laws to comply with, whereas if he attempts to provide accommodation it must be up to the bye-laws standard. Such being the case the Rural District Council naturally declined to make bye-laws. A Local Government Board Inspector visited the district and visited several farms

where pea picking was in progress. He afterwards attended a meeting of the Rural District Council and made certain suggestions, which the members thought impracticable.

ONGAR.

Medical Officer of Health—W. R. S. ROBERTS, M.B.

Area in acres, 1901 census (land and inland water) 47,236				
Population, 1901 census	...	...	10,044	
„ 1908 estimated	...	...	10,800	
Deaths registered in the district	...		141	
Corrections	...	Additions	...	0
„	...	Deductions	...	0
Nett Death-rate	...	1908.	Previous 10 years.	
	...	13·1	...	13·31
Infantile Mortality	...	56	...	97·6
Birth-rate...	...	23·5	...	22·6
Cases of notifiable diseases per				
1,000 population	...	9·9	...	4·5

On account of the death of Dr. Quennell, Dr. Roberts, who has succeeded him, has kindly prepared a brief report for the year 1908, which naturally deals only with the statistics, as he cannot speak personally of the actual work done during the year.

ORSETT.

Medical Officer of Health—REA CORBETT, M.R.C.S.,
L.R.C.P.

Area in acres, 1901 census (land and inland water) 39,939				
Population, 1901 census	...	...	19,912	
„ 1908 estimated	...	...	23,275	
Deaths registered in the district	...		331	
Corrections	...	Additions	...	5
„	...	Deductions	...	35

		1908.	Previous 10 years.
Nett Death-rate ...	...	12·95	14·27
Infantile Mortality ...	...	87	123
Birth-rate ...	...	30·4	31·9
Cases of notifiable diseases per			
1,000 population ...	...	9·3	11·4

The water supplies of the various parishes are enumerated. Negotiations are proceeding with the Southend Water Co. to supply certain areas near Laindon Hills, where building operations are in progress. The Rural District Council does not appear to own any waterworks in the district.

The sewerage of the district presents many difficulties, but several parishes are badly in want of sewers. Many schemes have been considered, but nothing has yet been done. Special vans are employed for emptying cesspools and several parishes are scavenged by the Council's contractors.

Many inhabitants are employed at the paper works, explosive works, oil refineries, cement works, etc. The cottage accommodation is improving and overcrowding does not exist to any great extent.

ROCHFORD.

Medical Officer of Health—F. D. GRAYSON, M.R.C.S.

Area in acres, 1901 census (land and inland water) 56,668

Population, 1901 census ... 14,457

„ 1908 estimated... 16,498

Deaths registered in the district ... 243

Corrections ... Additions ... 1

„ ... Deductions... 50

		1908.	Previous 10 years.
Nett Death-rate	11·7	12·8

Infantile Mortality	90·1	103·5
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Birth-rate	26·9	26·2
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Cases of notifiable diseases per

1,000 population	5·8	8·5
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As certain brickfields are now disused and works at South Fambridge and Rawreth are closed or partially closed it is probable that there has been no increase of population during the year.

The report deals solely with infectious diseases and mortality statistics. Dr. Grayson was unfortunately prevented completing the report on account of a serious accident.

ROMFORD.

Medical Officer of Health—A. WRIGHT, M.R.C.S.

Area in acres, 1901 census (land and inland water) 29,723				
Population, 1901 census	...	...	19,018	
„ 1908 estimated...	...	...	23,282	
Deaths registered in the district	...	...	214	
Corrections	...	Additions	...	30
„	...	Deductions	...	7
Nett Death-rate	...	...	1908. 10·1	Previous 10 years. 13·3
Infantile Mortality	...	...	87	119
Birth-rate	...	...	26·7	30·2
Cases of notifiable diseases per				
1,000 population	...	...	12·5	11·8

The report of the Medical Officer of Health is supplemented by reports from the two Sanitary Inspectors, and as there are few parishes in the district the report refers to the parishes separately or in small groups.

The extensive system of sewerage for the populous portion of Dagenham has been carried out but for some reason is not in working order, and is causing much anxiety to the Council.

At Hornchurch, in consequence of the continued prevalence of disease, a systematic testing of house drains shewed that 90 per cent. were defective. An owner who resented official interference gained a case, which was heard before the Romford Justices, and this has somewhat checked the progress of the investigation.

The South Essex Water Co. practically supplies the whole district with water, and during the year certain extensions of mains have been completed.

A number of houses have been closed because they were unfit for human habitation, and many others have been placed in a habitable state of repair.

The Ingrebourne Brook has been frequently inspected and almost invariably found to be polluted.

House refuse is removed fortnightly in Hornchurch and Upminster, and weekly in Great Warley parish. Pail closets are scavenged weekly in parts of Great Warley and Hornchurch. Where there are no sewers cesspools are emptied by a motor cleansing apparatus or by contract team labour. The average cost of cleansing a cesspool is 9s. in one district and 11s. 4d. in the other.

Mr. Cornell's account of the systematic inspection of Hornchurch is very interesting though painful reading. Nearly every house examined shewed more or less serious drainage defects. Even at the two Council Schools the defects were numerous and practically all had to be taken up and reconstructed.

SAFFRON WALDEN.

Medical Officer of Health—W. ARMISTEAD, M.B.

Area in acres, 1901 census (land and inland water) 59,975

Population, 1901 census	...	...	10,764
„ 1908 estimated...	...	...	9,578
Deaths registered in the district	...	...	128
Corrections	...	Additions	25
„	...	Deductions...	0
Nett Death-rate	...	1908. 15·9	Previous 10 years. 15·4
Infantile Mortality	...	103	100
Birth-rate	...	22·2	22·7
Cases of notifiable diseases per			
1,000 population	...	3·1	3·3

This is one of the few districts in Essex which appears to be decreasing in population. The housing accommodation appears to be fairly adequate, as there is an average of one house to every four inhabitants.

The water supply is chiefly from the chalk. The water level varies from 200 feet above O.D. at Quendon at the head of the Cam Valley to 120 feet at Chesterford, where the Cam leaves the district. A table, shewing the source of water supply and population of each parish, is included in the report. One parish is supplied from a spring arising in a churchyard, and two others chiefly from ponds.

Sewerage. Rickling and Quendon, adjoining villages, have a joint sewerage scheme. Other parishes would be improved by sewerage, but the expense is prohibitive. Stream pollution occurs at Newport and Great Chesterford.

No public scavenging is undertaken. The Local Government Board has requested the Council to scavenge Great Chesterford, and the opinion of the Parish Council has been taken thereon. Meanwhile action is deferred.

STANSTED.

Medical Officer of Health—R. A. DUNN, M.D., D.H.Y.

Area in acres, 1901 census (land and inland water) 22,954

Population, 1901 census	...	...	6,888
„ 1908 estimated	...	...	6,888
Deaths registered in the district	...		67
Corrections	...	Additions	21
„	...	Deductions	0
Nett Death-rate	...	1908.	Previous 10 years.
		12·8	13·6
Infantile Mortality	...	54	108·3
Birth-rate	...	21·4	22·8
Cases of notifiable diseases per			
1,000 population	...	2·9	3·8

Water Supplies. There is a private Water Co. in Stansted supplying the town. A number of well waters have been examined and most of them found to be unsatisfactory.

The sewage disposal works at Stansted have proved a success.

Two houses, which were unfit for human habitation, have been closed and 12 others placed in habitable repair.

TENDRING.

Medical Officer of Health—J. W. COOK, M.D.

Area in acres, 1901 census (land and inland water) 73,286				
Population, 1901 census	...	...	20,507	
„ 1908 estimated...	„	...	22,067	
Deaths registered in the district	...		295	
Corrections	...	Additions	...	6
„	...	Deductions	...	19
Nett Death-rate	...	1908.	Previous 10 years.	
	...	12·7	...	12·6
Infantile Mortality	...	67·4	...	99·2
Birth-rate	...	23·5	...	24
Cases of notifiable diseases per				
1,000 population	...	3·9	...	3

In the present state of the cottages in many parts it is impossible to prevent overcrowding. Building bye-laws have been adopted, but the plans when submitted do not appear to be adequately considered.

Water Supply. The supply from the Tendring Hundred Water Co. in eleven parishes has been satisfactory. The villages of St. Osyth, Great Bentley, and Ardleigh are much in need of a public supply.

Sewerage. Improvements are required in many districts, and a good deal of crude sewage gets into the Holland Brook and the River Stour.

At Manningtree and Parkeston scavengers are employed to remove the house refuse.

A good deal of attention is devoted to dairies and cow-sheds and the Medical Officer of Health is authorised to call in a veterinary surgeon where necessary. Tuberculous cows discovered have been "done away with" and in doubtful cases milk has been examined bacteriologically.

Sanitary supervision is exercised over all the public elementary schools.

There are comparatively few outworkers in this district.

TABLE A.
DEATHS IN EACH DISTRICT CLASSIFIED ACCORDING TO DISEASES.*
 Corresponding to Table IV. of the Local Government Board
 1908.

NAMES OF LOCALITIES.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Group.	Croup.	FEVER.			Epidemic Influenza.	Cholera.	Plague.	Diarrhea.	Enteritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Malignant Disease, Cancer.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism. Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Heart Diseases.	Diseases and Accidents of Parturition.	Accidents.	Suicides.	All other causes.	ALL CAUSES.	
							Typhus.	Typhoid.	Other continued.																									
URBAN.																																		
BARKING	9	..	4	11	...	...	3	...	7	...	...	38	1	...	1	...	36	13	16	27	35	1	1	5	4	9	25	1	11	7	111	376	
BRAINTREE	4	1	1	...	4	3	3	4	1	7	10	1	8	2	7	28	75
BRENTWOOD	2	6	4	6	7	1	26	61
BRIGHTLINGSEA	1	1	1	1	5	...	2	3	29	50
BUCKHURST HILL	4	4	3	1	3	3	5	1	5	3	...	1	1	...	33	76
BURNHAM
CHELMSFORD	2	...	4	1	...	...	1	...	4	...	...	1	...	...	...	...	9	3	10	18	11	...	...	...	...	6	...	...	...	...	...	...
CHINGFORD	1	1	1	9	4	6	2	3	...	1	2	2	30	...	2	3	74	181
CLACTON	6	...	1	1	1	3	1	4	2	24	64
COLCHESTER	9	1	7	5	...	...	2	...	6	...	...	14	4	...	1	12	5	6	12	10	3	...	3	3	...	9	12	...	2	...	38	115	
EAST HAM ...	29	24	7	65	...	...	...	3	...	29	...	...	81	18	5	3	11	108	63	89	114	95	8	10	17	7	63	34	2	36	4	194	483
EPPING	1	3	...	4	7	490	1419
FRINTON	2	1	4	7	8	3	19	45
GRAYS	5	3	3	6	2	...	1	1	1	2	2	8
HALSTEAD ...	11	...	...	3	...	...	...	...	...	...	...	...	...	1	1	...	...	10	1	9	12	15	...	...	...	1	7	11	...	11	2	47	146
HARWICH ...	5	...	20	...	...	...	...	2	...	...	...	...	...	1	1	...	...	5	3	12	5	5	...	1	2	...	5	10	1	1	1	27	95
ILFORD	6	3	8	8	...	...	...	...	11	...	...	14	18	1	3	6	4	3	6	22	10	1	6	2	...	8	19	...	8	1	65	182	
LEIGH-ON-SEA	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	38	33	55	51	39	...	3	8	2	29	67	...	11	4	215	632	
LEYTON	23	15	12	18	1	...	4	...	23	...	...	30	15	6	2	1	102	43	84	107	45	...	...	12	...	3	7	...	1	1	21	64	
LOUGHTON	1	1	...	...	...	...	...	...	...	1	2	...	...	...	4	...	2	3	5	...	...	...	...	2	5	...	...	...	16	43	
MALDON	1	...	...	...	...	3	...	...	...	...	...	...	...	...	...	4	3	10	8	4	...	...	...	...	2	11	...	2	...	38	89	
ROMFORD	2	4	1	6	...	...	...	...	...	...	...	3	...	...	...	...	10	9	21	10	13	1	...	...	...	10	22	1	4	...	70	188	
SAFFRON WALDEN	6	...	...	...	...	...	...	...	5	2	7	4	3	...	...	...	...	6	7	...	2	...	34	77	
SHOEBURYNESSE	1	...	...	...	...	5	1	2	...	3	...	4	...	...	6	7	...	...	...	...	...
SOUTHEND-ON-SEA	2	...	3	9	...	...	3	...	12	...	...	21	9	2	1	...	61	14	32	40	22	1	11	13	1	18	42	2	13	3	204	539	
WALTHAM H'LY CROSS	3	3	2	...	1	...	3	3	6	5	4	1	...	2	2	2	10	1	...	3	1	21	73
WALTHAMSTOW ...	36	11	2	20	2	...	...	13	1	10	...	...	26	9	5	3	12	103	38	94	114	99	...	...	6	11	65	51	10	32	9	476	1258
WALTON-ON-THE-NAZE	1	...	2	1	1	...	...	...	...	2	5	...	1	1	10	24	
WANSTEAD	6	...	...	...	1	...	4	...	...	2	...	...	...	...	4	1	9	4	5	1	...	...	1	3	7	...	3	7	34	99	
WITTHAM	2	...	...	...	...	...	...	...	...	1	...	...	...	4	1	6	...	1	...	...	...	1	3	7	...	...	...	12	37	
WIVENHOE	4	...	...	...	...	...	...	...	...	1	...	...	...	...	4	1	1	...	1	...	...	...	...	2	5	...	2	...	15	32	
WOODFORD	2	...	2	1	...	...	...	...	4	...	...	2	2	...	...	...	...	1	1	4	...	...	...	...	...	...	4	...	...	...	60	147	
TOTAL	...	142	60	100	154	4	...	36	1	137	...	...	252	91	20	19	41	605	273	561	659	452	17	47	87	31	346	586	36	186	68	2899	7894
RURAL.																																		
BEICHAMP...	2	...	...	...	...	...	...	7	...	...	...	7	2	...	...	1	...	4	3	3	...	...	...	...	1	2	1	...	2	49	68	
BILLERICAY	5	1	2	16	7	10	21	5	1	3	8	26	1	60	192
BRAINTREE	2	...	6	2	1	20	9	23	23	8	1	12	13	2	6	7	1	123	261
BUMPSTEAD	2	1	5	1	5	2	1	5	1	15	40
CHELMSFORD	4	1	9	9	19	4	19	26	14	1	12	46	114	287
DUNMOW	2	...	1	2	...	...	1	...	2	...	...	...	3	...	...	...	14	6	19	26	7	1	1	...	...	6	26	3	5	2	87	224	
EPPING	4	...	...	...	...	5	...	...	1	1	...	...	...	7	10	12	14	6	...	...	...	...	24	3	4	3	52	159		
HALSTEAD I.	2	...	...	...	...	...	1	...	...	...	...	...	...	...	4	1	10	4	5	...	...	...	...	6	24	3	...	...	23	66	
HALSTEAD II.	3	...	1	...	...	...	...	...	2	...	...	2	1	...	...	...	3	3	6	3	...	...	...	...	...	2	7	...	2	1	24	63	
LEXDEN & WINSTREE	1	3	8	2	...	1	...	3	...	...	...	4	1	...	...	14	9	24	21	8	...	...	...	...	8	32	...	2	...	91	235	
MALDON	3	...	...	...	...	4	...	...	1	...	...	...	...	12	7	18	12	6	...	...	...	...	5	29	...	1	...	79	183	
ONGAR	1	2	...	1	...	...	...	...	5	...	...	1	1	...	...	...	6	1	7	11	9	...	...	...	...	2	21	...	7	1	65	141	
ORSETT	4	6	10	1	...	...	...	7																								

*Exclusive of Burnham.

TABLE B.

DEATHS IN EACH DISTRICT CLASSIFIED ACCORDING TO AGES.
AREA, POPULATIONS, 1891 & 1901 & 1908, & NO. OF BIRTHS.

NAMES OF LOCALITIES.	Area in acres, land and inland water.	Population, Census 1891.	Population, Census 1901.	Increase per cent. during decennium.	Decrease per cent. during decennium.	Population, middle of 1908. (estimated to mid-year).	Persons per acre.	No. of Births.	Birth-rate.	No. of Deaths Net.	Death-rate.	DEATHS FROM ALL CAUSES AT SUBJOINED AGES.						Deaths under 1 year per 1,000 births.
												AT SUBJOINED AGES.						
												Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	
URBAN.																		
BARKING	3,803	14,301	21,547	50.7	...	30,000	7.8	924	30.8	376	12.4	110	65	17	16	109	59	117
BRAINTREE	2,224	5,303	5,330	.5	...	5,330	2.4	113	21.01	85	15.9	11	9	3	5	18	29	97
BRENTWOOD	460	4,949	4,932	...	-.35	7,747	16.8	130	16.7	61	7.8	8	5	4	0	14	30	61.5
BRIGHTLINGSEA	2,867	3,920	4,551	14.8	...	4,950	1.7	77	15.5	50	10	7	3	2	1	16	21	90
BUCKHURST HILL	873	4,130	4,786	15.9	...	5,300	6.0	106	20	76	14.34	20	9	1	2	19	25	188.6
BURNHAM	4,517	2,360	2,919	23.7	...	3,240	-.7	65	20.1	32	10.1	2	...	...	...	...	...	31
CHELMSFORD	2,854	11,008	12,580	14.3	...	17,200	6.0	399	22.93	181	10.53	27	8	11	4	54	77	67.64
CHINGFORD	2,808	2,737	4,373	59.8	...	6,710	2.3	164	24.4	64	9.5	8	5	...	3	31	17	49
CLACTON	4,069	3,584	7,456	108.0	...	7,993	1.9	169	21.14	103	12.88	20	10	5	5	36	39	118.3
COLCHESTER	11,333	34,559	38,373	11.0	...	41,456	3.6	976	23.55	483	11.65	88	44	20	34	149	148	90
EAST HAM	3,326	32,712	96,018	193.5	...	142,976	42.9	3,534	24.7	1,419	9.9	368	201	98	51	425	276	104
EPPING	1,420	3,223	3,789	17.6	...	4,342	3.0	93	21.4	45	10.3	7	2	2	...	14	20	75.2
FRINTON	403	75	644	759.7	...	1,500	3.7	33	22	8	5.3	0	...	2	1	3	2	0
GRAYS	1,359	12,397	13,834	11.6	...	15,750	11.6	424	28.1	146	9.3	39	13	9	8	45	32	89
HAILESTEAD	647	6,056	6,073	.3	...	6,100	9.4	101	16.55	95	15.57	18	10	...	4	28	35	178.2
HARWICH	1,541	8,202	10,070	22.8	...	11,188	7.2	326	29.1	182	16.2	44	36	4	8	35	55	137.3
ILFORD	8,496	10,913	41,234	277.8	...	75,205	8.9	1,663	23.2	632	8.9	132	56	25	25	205	189	79.8
LEIGH-ON-SEA	1,527	2,108	3,667	74.0	...	6,352	2.7	133	20.9	61	10.07	11	4	1	4	20	24	82.7
LEYTON	2,594	63,106	98,912	56.7	...	121,200	42.8	3,071	25.3	1,185	9.8	242	110	53	47	378	355	78.8
LOUGHTON	3,961	3,880	4,730	21.9	...	5,900	1.5	103	17.4	43	7.3	8	5	1	...	13	16	87.3
MALDON	3,028	5,397	5,565	3.1	...	5,701	1.8	140	24.6	89	15.6	7	1	1	3	28	45	50
ROMFORD	5,630	10,473	13,656	30.4	...	16,300	2.8	418	25.9	188	11.5	38	22	8	1	49	70	90
SAFFRON WALDEN	7,502	6,104	5,896	...	-.34	6,396	-.85	112	17.51	77	12.03	14	1	2	...	24	36	125
SHOEBURYNES	1,036	2,990	4,081	36.5	...	4,608	4.4	158	34.29	30	6.5	8	3	...	1	10	8	59.6
SOUTHEND-ON-SEA	5,172	13,242	28,857	117.9	...	57,399	11.1	1,098	19.12	539	9.39	101	23	27	26	202	160	93.62
WALTHAM HOLY CROSS	11,017	6,066	6,549	8.0	...	6,925	-.62	159	22.96	73	10.54	20	2	3	2	26	20	125.7
WALTHAMSTOW	4,343	46,346	95,131	105.3	...	131,486	30.2	3,482	26.48	1,258	9.6	351	142	57	47	385	276	100.8
WALTON-ON-THE-NAZE	2,065	1,586	2,014	27.0	...	2,173	1.04	52	23.93	24	11.04	4	...	...	...	13	7	76.92
WANSTEAD	1,679	7,043	9,179	30.3	...	12,530	7.4	247	19.7	99	7.9	15	6	1	8	27	42	60.7
WITHAM	3,706	3,444	3,454	.3	...	3,598	.9	80	22.2	37	10.2	3	4	1	2	11	16	37.5
WIVENHOE	1,564	2,441	2,560	4.9	...	3,000	1.8	63	21	32	10.6	8	5	3	...	4	12	128.6
WOODFORD	2,101	11,024	13,798	25.2	...	19,632	9.0	397	20.2	147	7.5	26	11	1	1	32	76	63.2
TOTAL	169,439	345,679	576,508	66.8	...	791,277	7.1	19,000	24.0	7,923	10.25	1,765	8156	3626	3096	2,4236	2,2196	93
RURAL.																		
BELCHAMP	26,500	5,719	4,847	...	15.3	4,847	-.18	90	18.6	68	14	7	0	3	0	15	43	77.7
BILLERICAY	49,391	15,606	17,504	12.2	...	17,504	-.31	409	26.9	192	12.7	28	9	10	10	50	85	68.5
BRAINTREE	62,355	19,734	18,109	...	8.2	18,106	-.29	366	20.02	261	14.3	35	12	8	19	80	107	98.3
BUMPSTEAD	11,874	2,886	2,541	...	11.3	2,299	-.19	52	22.6	40	17.3	7	1	0	2	10	20	134
CHELMSFORD	83,849	23,171	23,717	2.3	...	20,650	-.24	494	23.9	287	13.9	34	20	7	11	84	131	69
DUNMOW	73,503	16,674	15,705	...	5.8	15,440	-.21	342	22.15	224	14.5	19	11	10	7	46	131	55.5
EPPING	39,055	12,167	12,783	5.1	...	13,946	-.35	282	20.2	159	11.4	29a	10	5	4	52	59	102.8
HAILESTEAD I.	18,200	4,764	4,481	...	5.9	4,697	-.25	106	22.5	66	14.05	10	2	3	3	16	32	94
HAILESTEAD II.	20,512	6,049	5,695	...	5.9	5,695	-.27	110	19.31	63	11.06	7	7	1	2	14	32	63.6
LEXDEN AND WINSTREE	69,485	19,281	18,586	...	3.6	19,812	-.28	433	21.85	235	11.86	25	5	16	12	61	116	56.4
MALDON	82,342	15,741	14,633	...	7.0	14,800	-.17	361	24.4	188	12.7	22	8	4	7	43	104	61.0
ONGAR	47,236	10,557	10,044	...	4.9	10,800	-.22	255	23.5	141	13.1	14	3	3	7	31	77	56
ORSETT	39,939	14,913	19,912	33.5	...	23,275	-.57	708	30.41	301	12.95	63	31	15	16	92	84	87
ROCHFORD	55,386	11,931	14,565	22.1	...	16,498	-.29	444	26.9	194	11.7	35	12	10	4	62	71	90.1
ROMFORD	29,723	14,326	19,018	32.8	...	23,282	-.78	622	26.7	237	10.1	52	23	26	8	75	53	87
SAFFRON WALDEN	59,975	12,458	10,764	...	13.6	9,578	-.15	213	22.2	153	15.9	22	7	6	3	46	69	103
STANSTED	22,954	6,908	6,888	...	-.3	6,888	-.17	148	21.4	88	12.8	8	3	1	...	23	53	54
TENDRING	73,131	19,904	20,346	2.2	...	22,067	-.3	519	23.51	282	12.73	35a	15	13	9	69	141	67.4
TOTAL	865,410	232,792	240,132	3.2	...	250,179	-.29	5,954	23.8	3,179	12.95	462	179	147	124	869	1408	76

a. These figures do not correspond with those given in Table A.
b. Exclusive of Burnham.

TABLE C.

(Corresponding to Table III. of the Local Government Board.)

NUMBER OF CASES OF DISEASE NOTIFIED IN EACH DISTRICT AND NUMBER REMOVED TO HOSPITAL. 1908.

NAMES OF LOCALITIES.	CASES NOTIFIED IN EACH LOCALITY.									NUMBER OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.								
	Small-pox.	Cholera.	Diphtheria, including Membranous Group.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Continued Fever.	Puerperal Fever.	TOTALS.	Small-pox.	Cholera.	Diphtheria, including Membranous Group.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Continued Fever.	Puerperal Fever.	TOTALS.
URBAN.																		
BARKING	49	29	145	22	...	1	246	...	...	39	1	114	14	...	...	168
BRAINTREE	5	3	20	...	...	...	28	...	...	3	...	19	...	...	...	22
BRENTWOOD	4	...	50	...	...	...	54	...	...	2	...	31	...	...	...	33
BRIGHTLINGSEA	12	1	6	...	...	...	9	...	...	...	...	...	...	...	...	...
BUCKEYST HILL	1	3	1	...	...	...	5	...	...	...	...	...	...	...	...	...
BURNHAM
CHELMSFORD	10	3	16	7	...	1	37	...	...	8	...	15	5	...	...	23
CHINGFORD	8	6	28	...	...	...	42	...	...	3	...	12	...	...	...	15
CLACTON	10	1	39	...	...	...	50	...	...	7	...	30	...	...	...	37
COLCHESTER	41	22	128	11	...	1	203	...	...	26	...	96	7	...	...	129
EAST HAM	156	154	1000	18	...	5	1633	...	...	329	9	577	8	...	2	925
EPPING	1	52	...	...	...	53	...	...	...	...	44	...	...	...	44
FRINTON	3	1	...	...	...	4	...	...	...	...	...	...	...	...	...
GRAYS	19	9	34	2	...	1	65	...	...	...	...	5	1	...	...	6
HALSTEAD	6	12	1	...	2	21	...	...	...	...	...	...	...	...	...
HARWICH	6	2	13	9	...	...	30	...	...	2	...	11	7	...	...	20
ILFORD	161	56	446	12	2	2	679	...	...	79	1	296	8	2	...	386
LEIGH-ON-SEA	2	...	5	...	...	...	7	...	...	90	16	...	...	...	...	...
LEYTON ...	2	...	219	94	578	25	...	7	925	1	...	90	16	284	17	...	2	410
LOUGHTON	2	3	9	1	...	...	15	...	...	...	...	6	...	...	...	6
MALDON	30	4	16	9	...	1	60	...	...	13	...	11	4	...	...	28
ROMFORD ...	1	...	27	24	115	6	...	...	173	1	...	24	...	80	1	...	...	106
SAFFRON WALDEN	1	4	1	1	...	...	7	...	...	1	...	1	...	...	...	2
SHOEBURYNES	1	2	3	6	...	...	12	...	...	...	...	2	4	...	...	6
SOUTHEND-ON-SEA	79	18	170	26	...	2	295	...	...	65	...	138	20	...	...	223
WALTHAM HOLY CROSS	6	6	21	...	...	...	33	...	...	5	...	14	...	...	...	19
WALTHAMSTOW	223	111	635	37	...	8	1014	...	...	172	7	410	22	...	2	613
WALTON-ON-THE-NAZE	1	...	21	1	...	...	23	...	...	...	...	14	...	...	...	14
WANSTEAD	11	2	37	1	...	...	51	...	...	8	...	32	...	...	...	40
WITHAM	11	1	...	...	...	...	12	...	...	...	...	...	...	...	...	...
WIVENHOE	6	2	...	...	...	...	8	...	...	...	...	...	...	...	...	...
WOODFORD	17	17	54	3	...	...	91	...	...	8	...	27	1	...	...	36
TOTAL ...	3	...	1408	587	3656	198	2	31	5885	2	...	884	34	2279	119	2	6	3326
RURAL.																		
BELCHAMP	3	1	13	...	...	...	17	...	...	...	...	...	...	...	...	...
BILLERICAY	34	9	51	13	...	1	108	...	...	26	...	46	4	...	...	76
BRAINTREE	5	12	34	8	...	...	59	...	...	...	...	19	7	...	...	26
BUMPSTEAD	5	2	3	...	...	1	11	...	...	...	...	...	...	...	...	...
CHELMSFORD	6	5	44	1	...	...	56	...	...	1	...	12	...	...	...	13
DUNMOW	20	21	28	2	...	...	71	...	...	11	...	15	...	...	...	26
EPPING	6	5	75	...	...	...	86	...	...	5	...	61	...	...	...	66
HALSTEAD No. 1	2	8	4	2	...	...	16	...	...	...	...	1	2	...	...	3
HALSTEAD No. 2	8	7	...	...	...	15	...	...	...	...	5	...	...	...	5
LEXDEN & WINSTREE	25	10	39	6	...	1	81	...	...	...	...	...	...	...	...	...
MALDON	13	6	25	3	...	...	47	...	...	2	...	15	2	...	...	19
ONGAR	10	8	88	...	...	1	107	...	...	...	...	...	...	...	...	...
ORSETT	76	10	125	4	...	2	217	...	...	65	...	74	4	...	1	144
ROCHFORD	11	13	56	17	...	...	97	...	...	6	...	43	10	...	...	59
ROMFORD	102	16	166	7	...	2	293	...	...	72	...	126	...	...	...	198
SAFFRON WALDEN	13	5	11	1	...	...	30	...	...	4	...	9	...	...	...	13
STANSTED	6	4	10	...	...	...	20	...	...	4	...	4	...	...	...	8
TENDBRING	22	8	55	2	...	...	87	...	...	...	...	...	...	...	...	...
TOTAL..	359	151	834	66	...	8	1418	...	...	196	..	430	29	...	1	656

TABLE D.
INFANTILE MORTALITY.

	URBAN DISTRICTS.																			RURAL DISTRICTS.																				
	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 1 month.	1-2 months.	2-3 months.	3-4 months.	4-5 months.	5-6 months.	6-7 months.	7-8 months.	8-9 months.	9-10 months.	10-11 months.	11-12 months.	Total deaths under 1 year.	Percentage of total deaths due to each cause.	Mortality rate per 1,000 Births.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 1 month.	1-2 months.	2-3 months.	3-4 months.	4-5 months.	5-6 months.	6-7 months.	7-8 months.	8-9 months.	9-10 months.	10-11 months.	11-12 months.	Total deaths under 1 year.	Percentage of total deaths due to each cause.	Mortality rate per 1,000 Births.		
Small-pox
Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	1	2	...	3	1	5	3	4	19	13	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	05	05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	6	5	...
Diphtheria & Croup	1	1	05	05	1	...	4	8	6	...
Whooping Cough	...	...	...	...	...	4	1	3	1	3	3	6	4	3	6	3	37	21	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	4	3	...
Diarrhoea, all forms	1	3	2	8	14	20	23	23	23	15	17	6	16	13	17	8	195	111	103	14	30	65	23	...
Enteritis, Muco-enteritis	...	1	4	2	7	8	6	10	11	7	1	2	2	1	3	...	58	32	30	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gastro-enteritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gastritis, Gastro-intestinal Catarrh	1	...	1	3	5	6	2	3	1	...	1	...	2	1	1	...	22	12	11	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Premature Birth	231	37	24	14	306	17	6	2	1	1	...	...	1	1	...	...	335	192	177	87	4	7	7	105	5	1	1	1	1	2	...	...	...	...	...	...	...	...	...
Congenital Defects	57	7	9	10	83	8	7	4	2	3	1	...	1	...	1	...	110	62	57	12	4	2	...	18	2	1	1	...	1	...	...	...	...	...	...	...	...	...	...
Injury at Birth	7	...	1	...	8	...	...	...	...	...	...	...	...	...	...	...	8	4	4	4	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Want of Breast-milk, Starvation	...	1	4	2	7	3	1	1	...	1	1	...	...	1	...	...	15	8	7	1	...	...	1	2	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Atrophy, Debility, Marasmus	64	34	19	19	136	44	32	20	15	11	8	5	4	6	2	4	287	164	152	10	3	4	4	21	6	5	4	2	2	2	4	1	...	...	...	...	...	...	...
Tuberculous Meningitis...	...	...	...	...	...	1	2	1	3	4	4	1	4	6	3	1	30	17	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Peritonitis...	...	...	...	...	...	...	1	3	...	5	3	...	4	2	...	3	21	12	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Dis....	...	...	1	1	2	...	1	4	4	1	2	1	...	3	...	2	20	11	11	1	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	1	...	1	3	2	...	...	...	1	...	...	...	...	...	7	4	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis	...	1	4	3	2	5	6	6	1	...	...	...	2	...	...	1	31	18	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	3	2	2	1	1	...	1	...	10	5	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tub.)	...	...	1	...	1	2	...	2	4	2	2	2	2	2	...	2	20	12	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions	...	27	13	8	50	16	8	7	9	3	6	5	1	5	2	...	112	62	59	10	3	3	1	17	3	2	3	3	2	3	3	...	2	1	1	40	87	67	...	
Bronchitis	...	...	5	10	7	24	12	14	8	11	4	11	8	13	8	7	142	81	75	...	1	2	3	6	4	6	3	5	5	4	3	2	6	1	1	46	100	77	...
Laryngitis	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia	...	3	2	8	4	10	11	15	10	10	9	6	8	9	10	10	125	71	66	...	1	1	1	3	3	4	2	...	5	1	4	2	1	3	2	30	65	50	...	
Suffocation, overlaying...	10	1	...	3	14	6	4	4	1	1	...	...	...	...	...	...	30	17	15	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Other causes	...	26	10	10	5	12	6	5	7	1	2	5	4	2	5	4	104	59	54	11	2	1	...	14	6	1	3	2	2	3	3	...	...	...	...	...	...	...	...
Total	428	118	106	82	734	190	131	127	105	83	66	55	63	75	64	49	1742	1000	915	138	19	23	21	201	42	32	28	21	22	22	22	15	21	14	18	458	1000	757	...	

This table includes the deaths in all districts except Burnham.